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New Jersey Department of Transportation

1997 Annual Report ***Conditions and Trends***

Infrastructure

Maintenance and Operations

Capital Program

Safety

MVS Operating Statistics

Goods Movement and Modal Choice

Customer Satisfaction Survey

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John J. Haley, Jr.
Transportation Commissioner
Board Chairman, NJTransit

1997 Annual Report on Conditions and Trends

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I. INTRODUCTION

As originally conceived, the purpose of the annual report effort was to provide statistical information on a regular basis about NJDOT performance in infrastructure, operations and management practices; a way to monitor progress on selected operational measures; and a customer satisfaction survey on key departmental activities.

The *1997 Annual Report on Conditions and Trends*—developed and refined closely with the Policy Advisory Committee (PAC)—was completed earlier this year. To ensure that the measures developed reflected performance for the entire department, each PAC member was first asked to identify key Department activities, and then identify suitable measures for those activities. Next, staff from appropriate NJDOT divisions were asked to provide available data for use in evaluating these key activities. This available data, along with the results from several customer opinion surveys, provided the material for this first annual report.

Since the *1997 Annual Report on Conditions and Trends* was completed, the Department has developed and refined specific goals, objectives and performance measures. Beginning in September 1997, twenty-five of these measures are now provided to the Commissioner in a monthly management report format. The Monthly Management Report provides up-to-the-minute, detailed information by department on critical issues and key performance indicators. Over the course of twelve months, or on a multi-year basis, the Annual Report will allow the Department to examine the larger transportation picture of the state, historic conditions and trends, and the effects over time of departmental policies, or changes in policies. The public survey component is planned to be conducted on a biennial basis.

The *1997 Annual Report on Conditions and Trends* consists of three documents: (1) a series of 20 measures categorized in six departmental activities, categorized by department activity, (2) a technical summary of how those measures were derived, and (3) the results of a series of customer opinion surveys that provide the Department with baseline public perceptions.

The Annual Report as a Measure of Strategic Performance

With additional refinements, future iterations of the Annual Report will provide a valuable tool for measuring the Department's performance. To date no specific effort has been made to quantify and assess the Department's progress in strategic areas.

When combined, these tools will allow the Department to truly measure progress, and will provide senior management with (1) a means to measure operations and demonstrate accountability, (2) a central place to locate meaningful information about the department's activities and transportation in New Jersey, (3) the ability to assess gaps in performance measures and standards, and (4) a means to contrast consistency of performance with public perception.

Future Annual Reports

As noted, the initial Annual Report tracks the performance of key operational activities for which data was available at the time. There were many measures which could not be incorporated into the initial version because relevant data for measurement was either unavailable, or not easily accessible (for example, the Department was in the process of developing a sign inventory at the time of data collection for this report). As a result, this initial Annual Report should be viewed as a baseline version, with subsequent years providing the opportunity to refine or redirect the focus as needed.

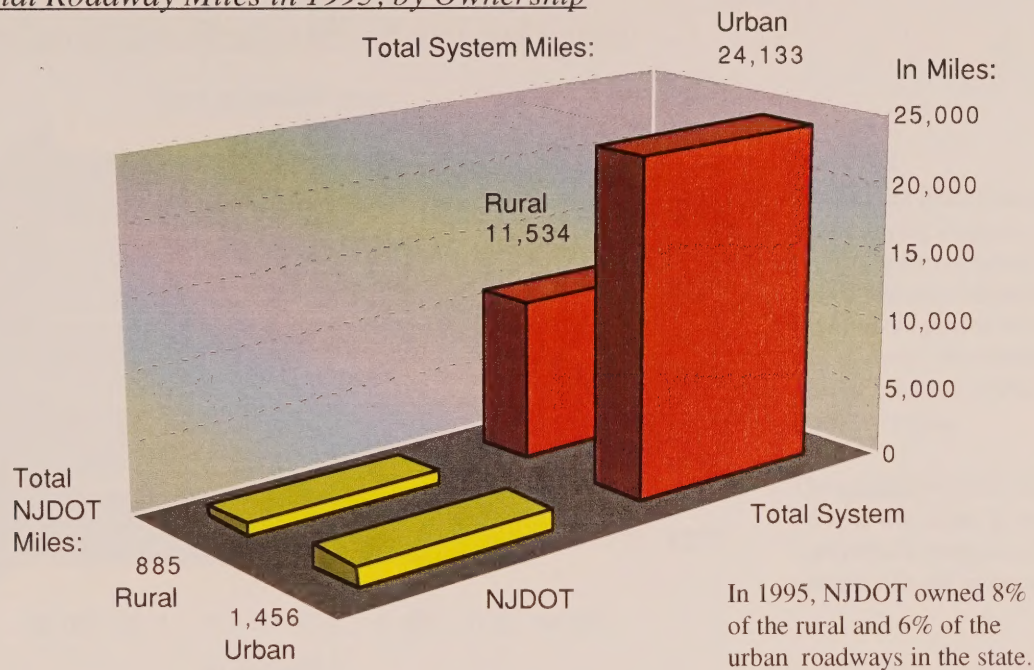
Appendix A: Route Miles by Functional Classification



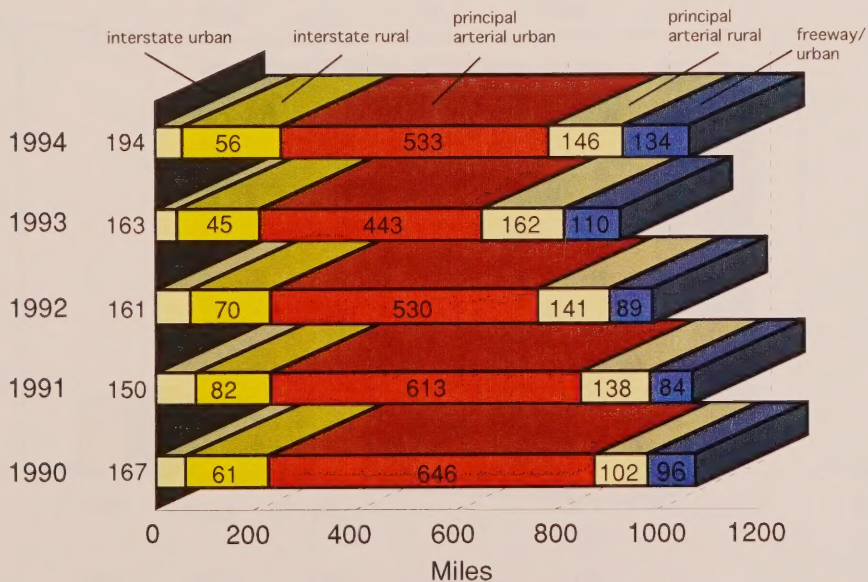
1997 Annual Report on Conditions and Trends

INFRASTRUCTURE

Total Roadway Miles in 1995, by Ownership



Congested* Route-Miles, by Functional Classification



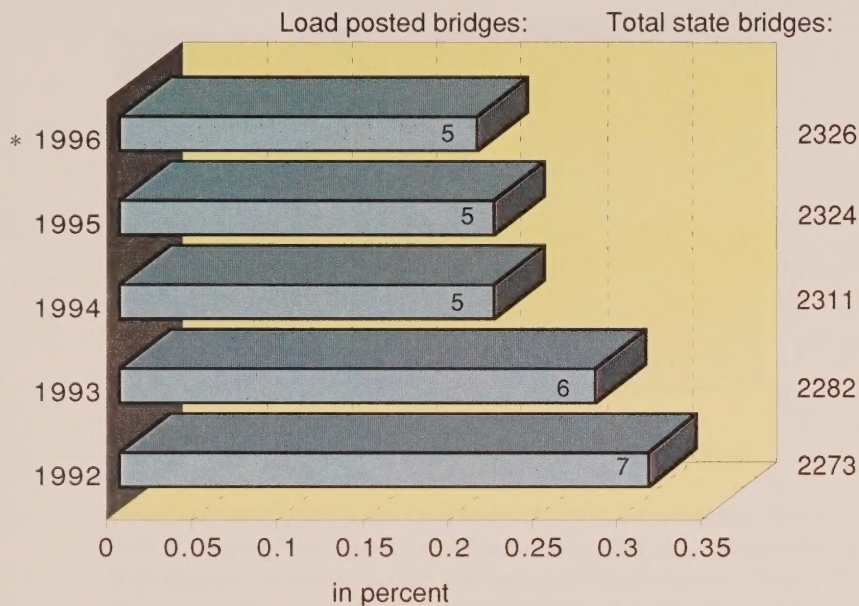
More than 40% of the state highway system is congested. In 1994, approximately 1,000 miles of the state's 2,400 mile system carried more than 80% of their designed capacity.

*Note: The federal definition for congestion has been utilized in these statistics, and is defined as a roadway with .8 or greater volume-to-capacity (v/c) ratio

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INFRASTRUCTURE

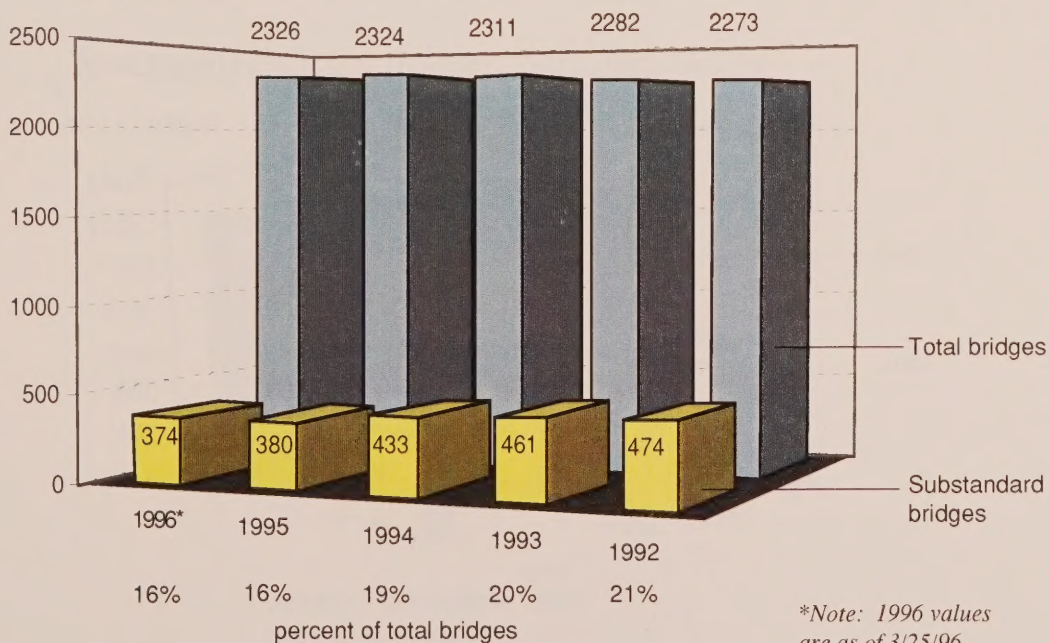
Percent of State Bridges Which are Load Posted



Bridges are posted based on the load carrying capacity of the bridge; however, some bridges are structurally adequate for load but are posted to control truck access. Posted bridges may be closed to traffic with no plans to reopen.

The number of state highway bridges which are posted has consistently been less than one percent of total bridges.

Substandard State Bridge Decks



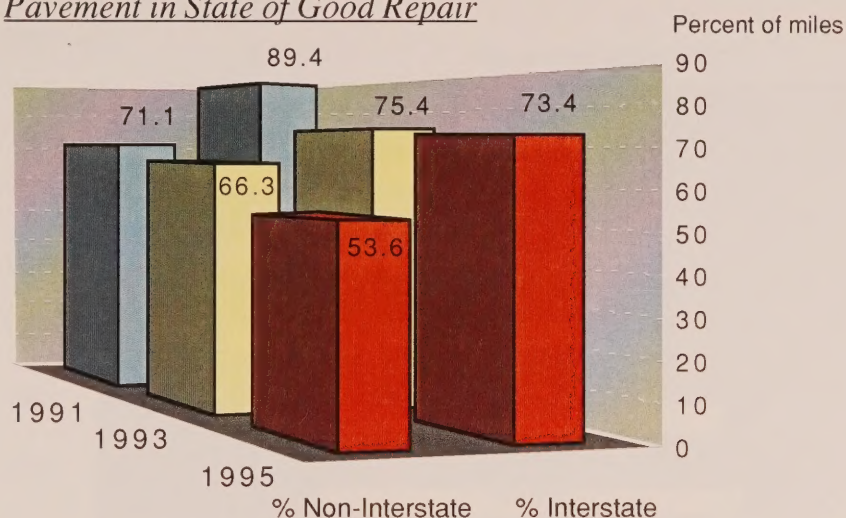
*Note: 1996 values are as of 3/25/96

Bridge deck condition is assessed as part NJDOT's Bridge Condition Inspection Survey. The percent of bridges with deficient bridge decks has decreased slightly over time, from about 21% in 1992 to about 16% in 1995.

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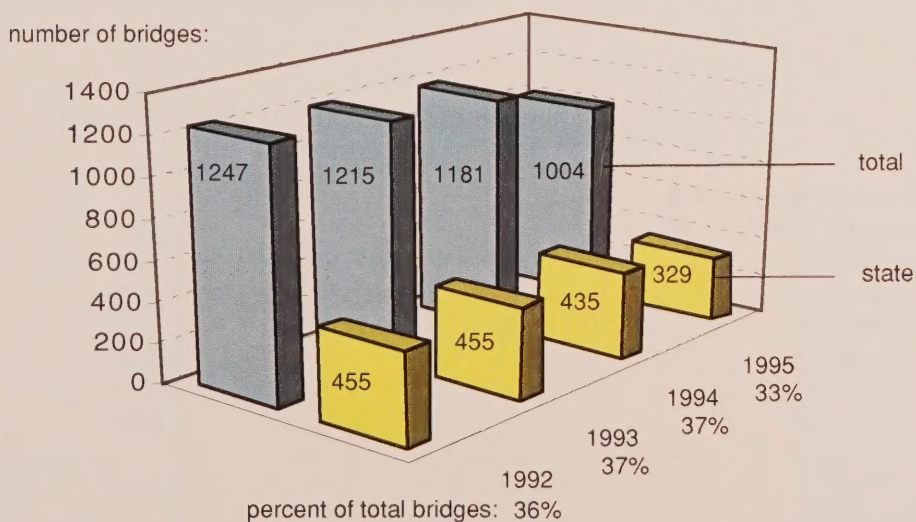
INFRASTRUCTURE

Pavement in State of Good Repair



Pavement condition is rated on a scale of 0 to 5, with 0 being "very poor" and 4.01 to 5 being "very good." Final pavement rating is a combination of Aran Ride Quality, pavement rutting and surface distress indices. "State of Good Repair" is defined as a final pavement rating of 3.0 or better, and is, among other factors, the basis of a 'Pavement Priority List'. The percent of both interstate and non-interstate miles in "State of Good Repair" has been declining over the past five years.

Structurally Deficient Bridges: State Jurisdiction



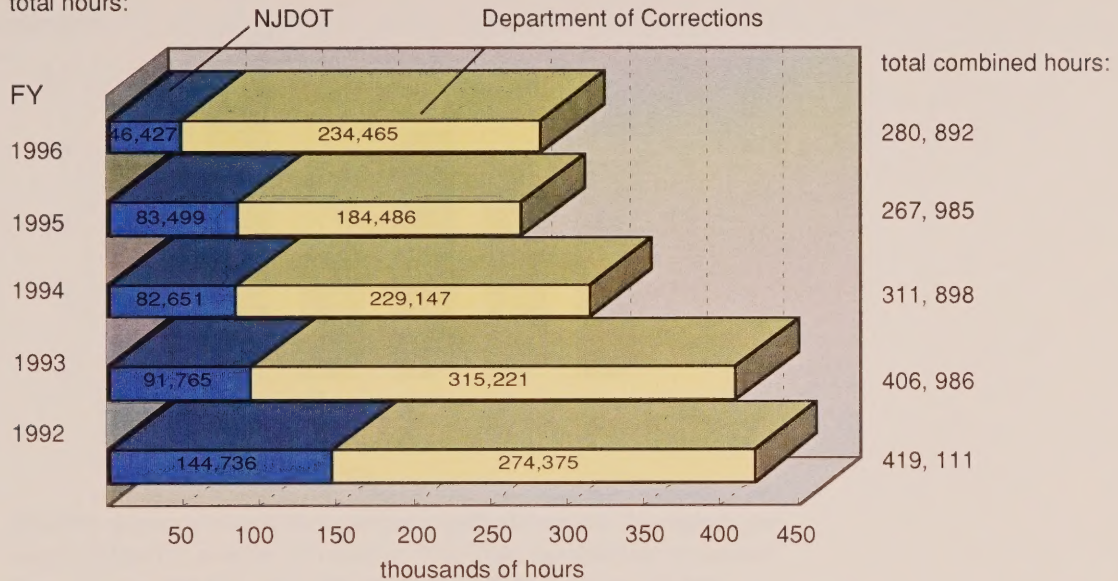
Bridge inspections are conducted on a two year cycle, with some inspected more frequently based on bridge type and condition. Over the past four years, according to the Structural Evaluation and Bridge Management Unit, the number of bridges has decreased at a faster rate than the number of structurally deficient bridges under state jurisdiction.

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MAINTENANCE AND OPERATIONS

Hours of Litter Removal

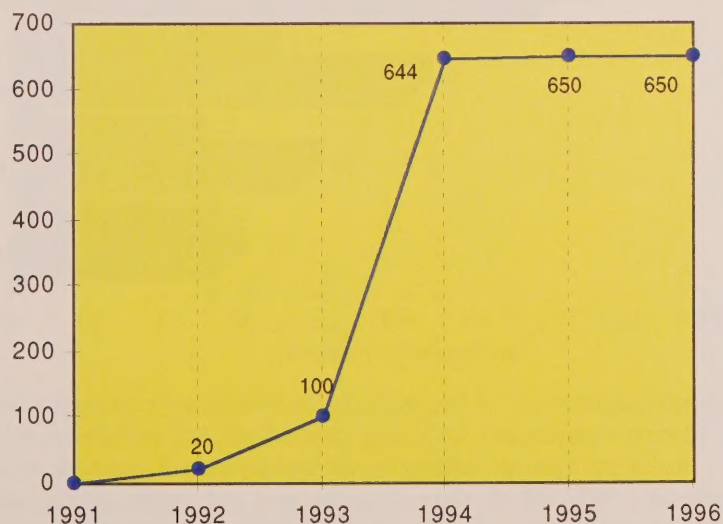
total hours:



Litter is picked up through state force and Department of Corrections (DOC) contracts, and the Department's Adopt-a-Highway Program. Hours are recorded for state force and DOC contracts, but tons picked up are only recorded for DOC contracts. Variation in hours is a result of changing resources and priorities. Reductions in resources are partially offset by the Department of Corrections and NJDOT's Adopt-a-Highway Programs.

Source: Maintenance Engineering, NJDOT annual statistics.

Number of Adopt-a-Highway Locations



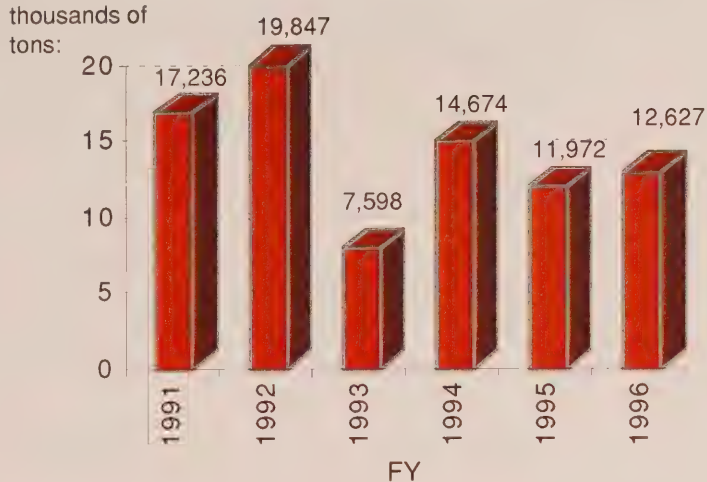
Since the Adopt-a-Highway Program began, 650 locations have been adopted. Each location is an average length of between one and two miles.

Source: Bureau of Maintenance and Operations, NJDOT, annual statistics.

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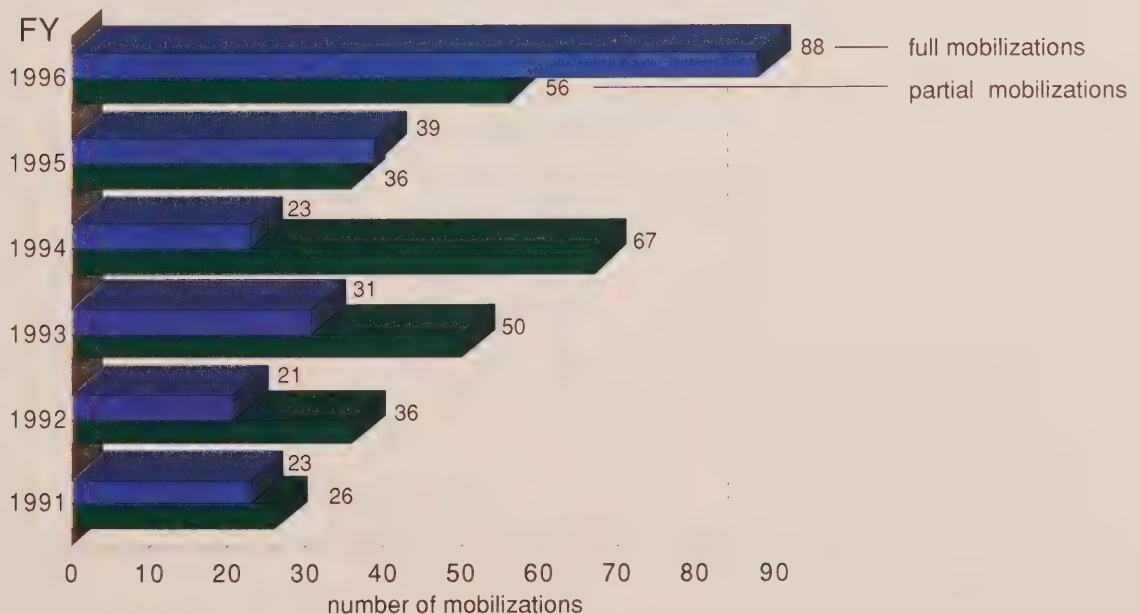
MAINTENANCE AND OPERATIONS

Bituminous Patch Used to Repair Roadway



Bituminous patch is used for emergency pothole repairs. Variations are largely related to severity of weather. The 1996 numbers above reflect data prior to NJDOT's establishment of a toll-free number (1-800-POTHOLE) for the public to call to report potholes.

Snow Preparedness: Number of Full and Partial Mobilizations



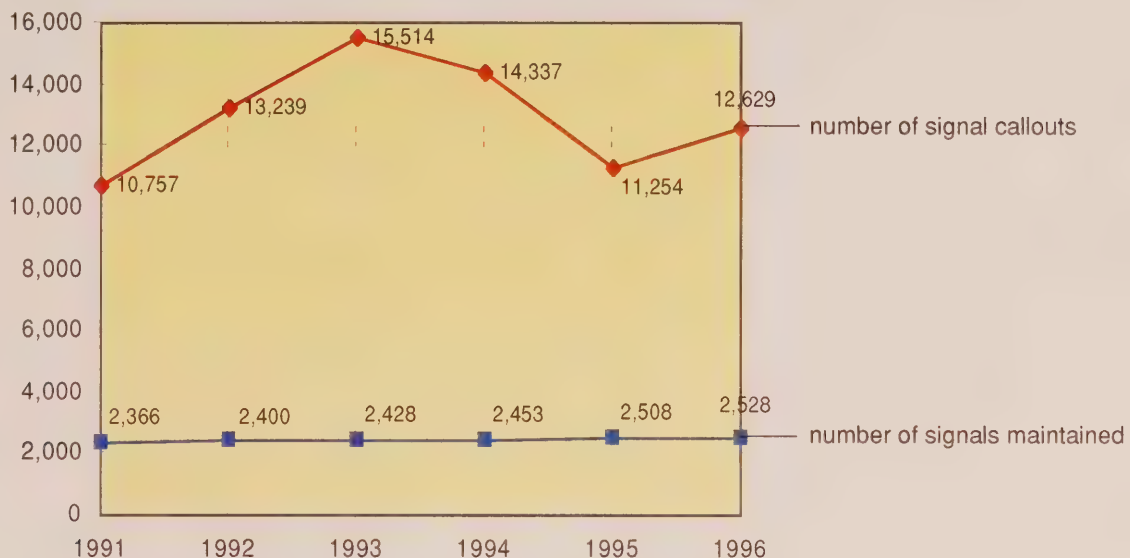
Full mobilizations are statewide efforts deployed for snow preparedness; partial mobilizations indicate that only part of the Department's crew or resources are used. Both are a function of weather severity and actual weather patterns, which may vary across the state. In FY 1996, a severe winter, approximately \$41 million was spent on snow preparedness operations.

Source: Bureau of Maintenance and Operations, NJDOT.

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MAINTENANCE AND OPERATIONS

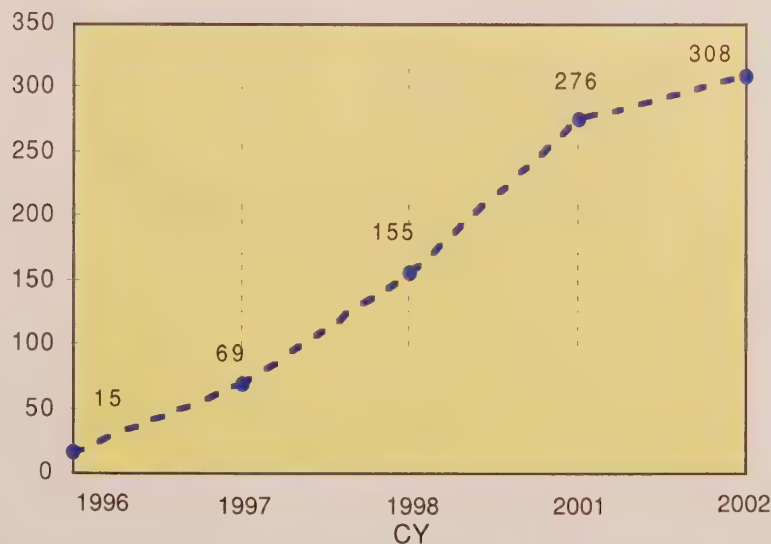
Number of Signal Callouts



A callout is a response to any emergency reported by an outside agency or the public. Callouts include highway, sign, and drawbridge lighting, and traffic signals. Traffic signal callouts include lampouts, knockdowns, timing problems and twisted fixtures. The number of callouts will fluctuate for numerous reasons, including an increase in the number of signals maintained, the time between signal relamping, low quality or defective traffic signal lamps and the weather. In FY 1997, callouts are anticipated to increase due to the Department's street sign program, which will install signs on traffic signal mast arms.

Source: Bureau of Maintenance and Operations, NJDOT, annual statistics.

Computerized Integration of Traffic Signals



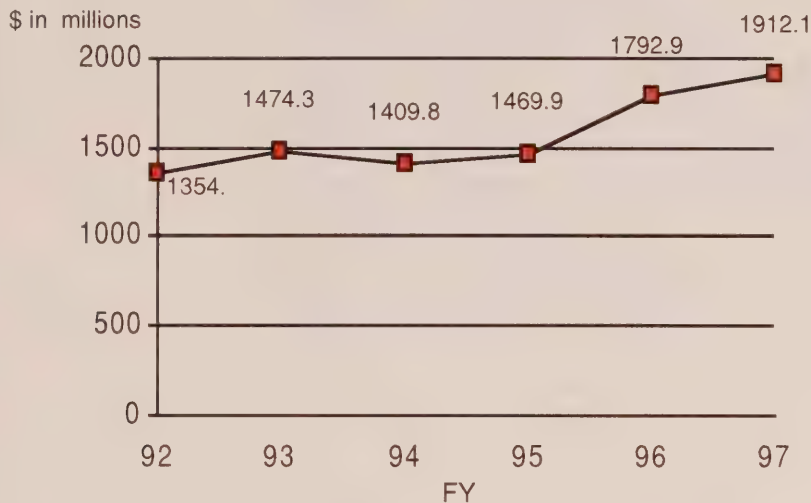
NJDOT has established goals to construct 308 miles of integrated traffic signalization over the next five years. Currently 15 miles are operating; as of January 1997, an additional 41 miles were substantially completed, and 13 miles were under construction.

Source: Intelligent Transportation Systems (ITS) Engineering, NJDOT.

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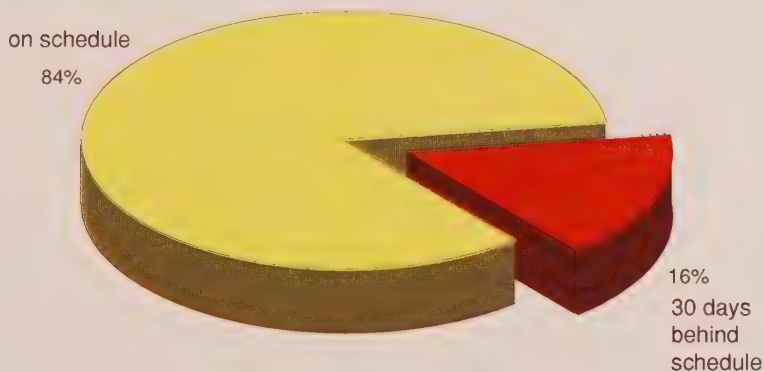
CAPITAL PROGRAM

Dollar Value of Capital Program Programmed in the State Budget



The annual Capital Program for NJDOT and NJ TRANSIT has increased almost half a billion dollars since FY 1995. This is due to an increase in the Transportation Trust Fund from \$565 million to \$700 million a year, and to Federal funding for NJ TRANSIT's Urban Core projects.

Active Capital Project Schedule Status

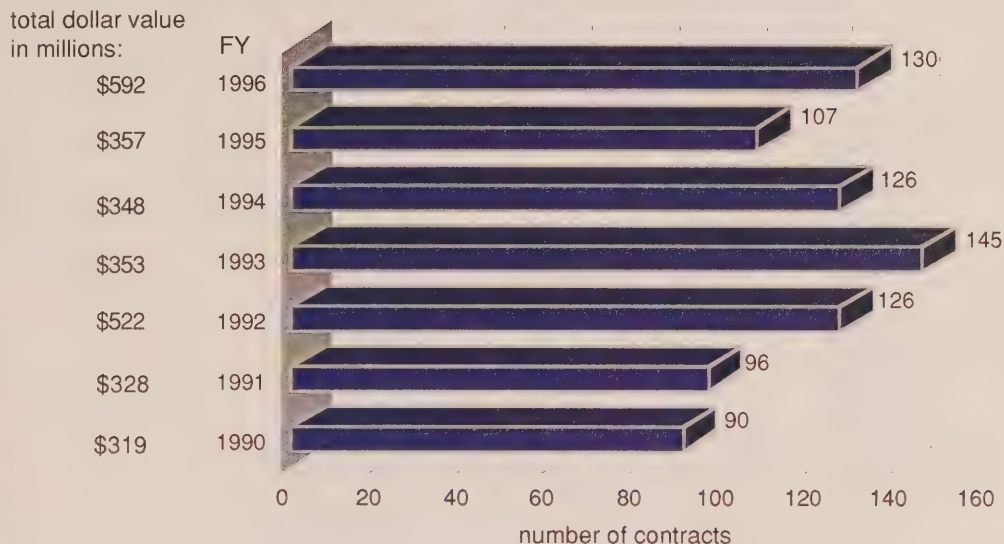


As of October 1996, of the 147 projects in the current Five Year Capital Program, 84% are on or ahead of schedule, and 16% are behind schedule by 30 days or more. Of the projects on or ahead of schedule, 5% are ahead of schedule by 30 days or more.

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CAPITAL PROGRAM

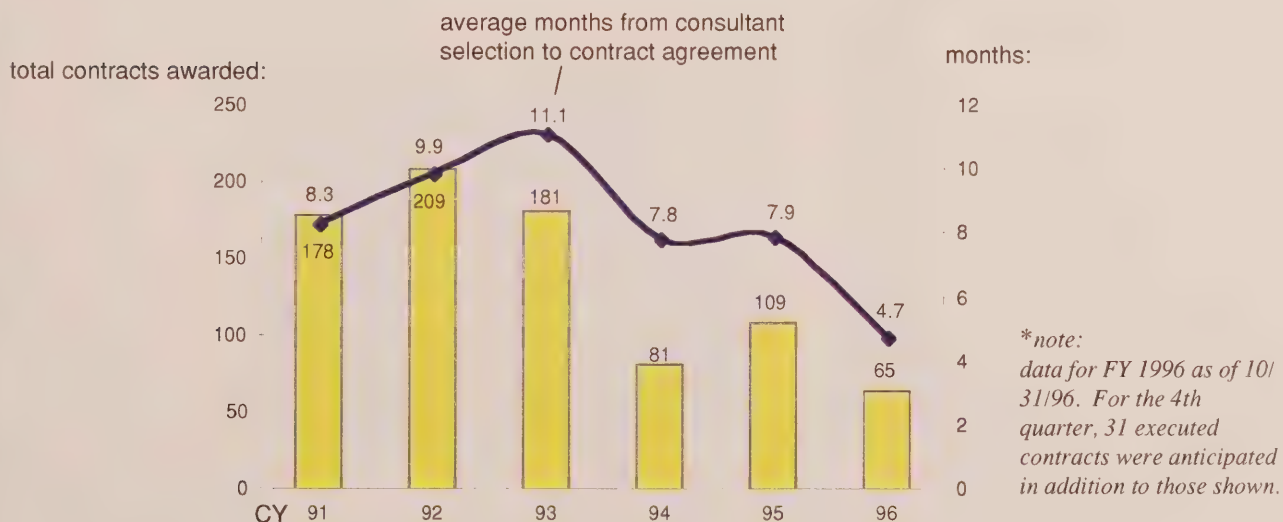
Construction Contracts Awarded



In FY 1993, the largest number of construction contracts were awarded, but the highest total dollar awards occurred in FY 1996.

Source: Bureau of Construction Services, Division of Procurement, NJDOT, Quarterly Reports

Professional Service Contracts, by Fiscal Year & Time from Consultant Selection to Agreement Execution



During the last six calendar years, the Department executed the highest number of professional services contracts in 1992. The Department's recent streamlined consultant selection process policy (approved on February 3, 1995) has aimed to shorten the time from contract selection to agreement execution.

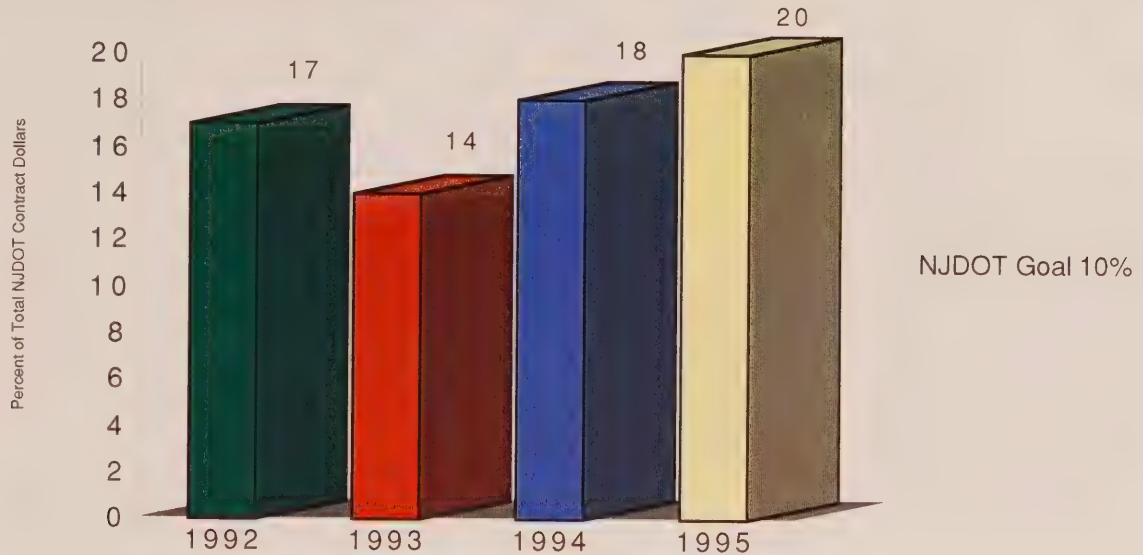
Source: Department of Finance and Administration, NJDOT

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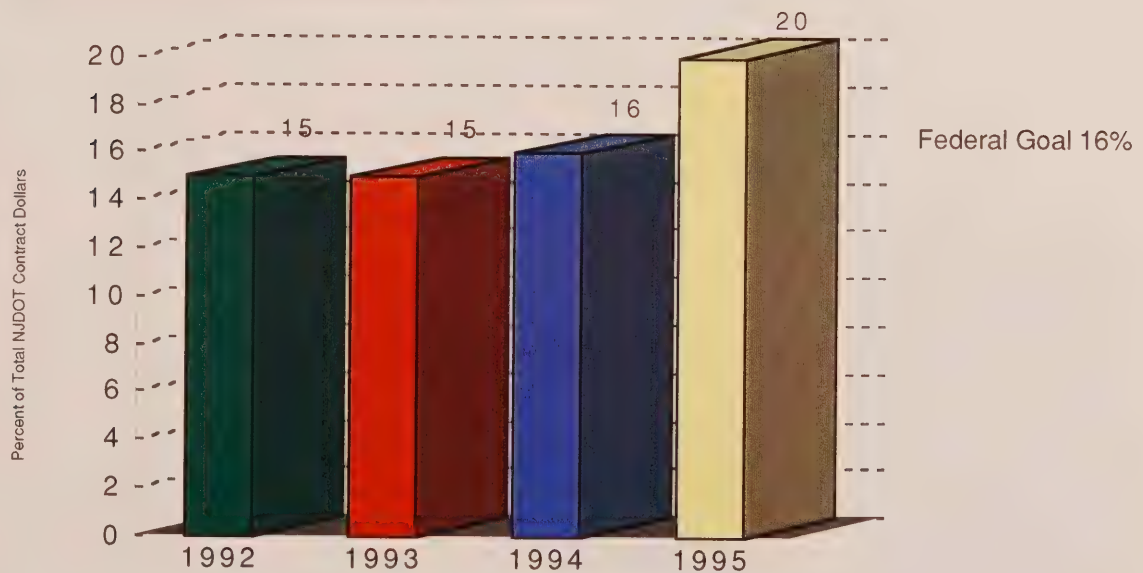
CAPITAL PROGRAM

Procurement of Disadvantaged Business Enterprises (DBE) Services

DBE Participation in State-Funded Contracts



DBE Participation in Federal Program Contracts



In each of the last three years, NJDOT has exceeded both the federal goals for federally-funded projects, and its own internal goals for DBE participation in state-funded projects. There has been a steady increase in the DBE share each year shown due to the Department's policy to increase DBE participation in the growing Capital Program.

Source: *Monthly Report: DBE Program Highlights*, Division of Civil Rights/Affirmative Action, NJDOT.

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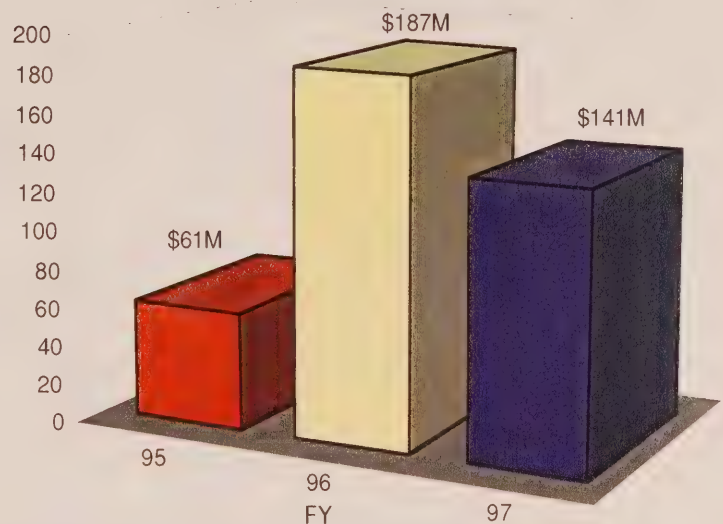
CAPITAL PROGRAM

Projects and Investment in State Development and Redevelopment Plan Centers

The State Development and Redevelopment Plan (SDRP) encourages communities to accommodate future growth within designated centers.

Executive Order 114 in 1993 required all state agencies to comply with the SDRP. The number and dollar value of projects in designated centers is a primary indicator of how well NJDOT is allocating resources to these communities. While the number of designated centers has increased slightly each year, the number and value of NJDOT programmed projects in those centers has declined between 1996 and 1997.

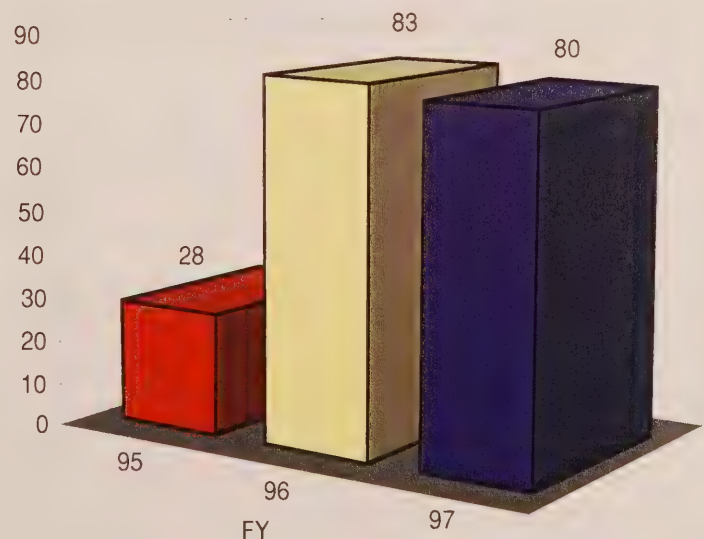
Total Dollar Value of Projects in Designated Centers



SDRP Designated Centers as of August 1, 1996

- 1992 Atlantic City
- Camden
- Elizabeth
- Jersey City
- New Brunswick
- Newark
- Paterson
- Trenton
- 1993 Newton
- Woodstown
- Hopewell
- 1994 Millville/Vineland
- Dover
- Ridgefield
- 1995 Princeton Borough/
Princeton Township
- Morristown
- Hopatcong
- Mendham
- 1996 Long Branch
- Red Bank
- Bridgewater/Raritan/Somerville
- New Egypt section/Plumsted Township
- Cranbury Village section/Cranbury Township

Number of Projects in Designated Centers

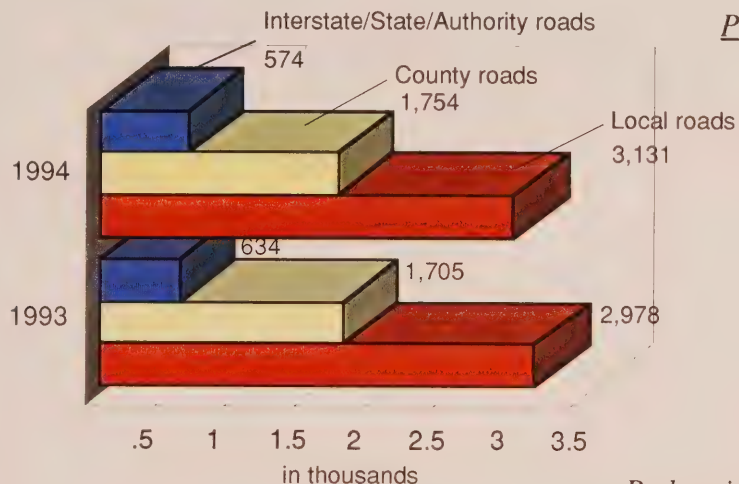


source: FY 95, 96 and 97 Capital Program data base, NJDOT

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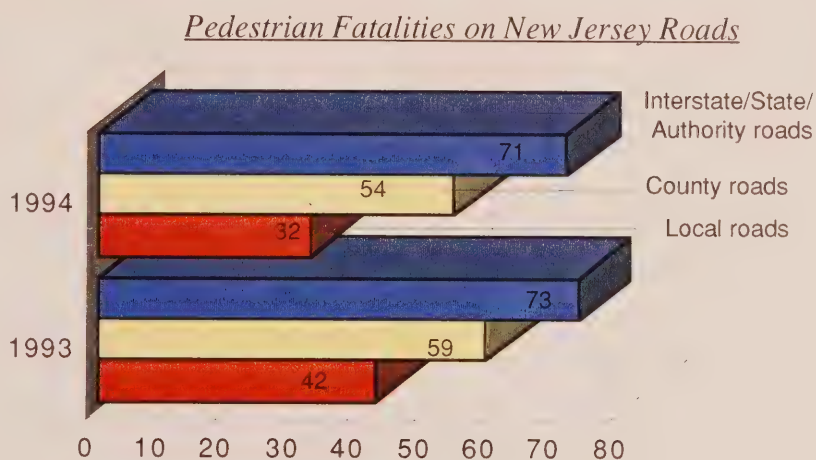
SAFETY

Pedestrian injuries and fatalities are classified as on-roadway or off-roadway. On-roadway indicates that a pedestrian was on the road at the time of incident. Off-roadway indicates a vehicle was in a pedestrian zone, such as a car jumping the sidewalk.

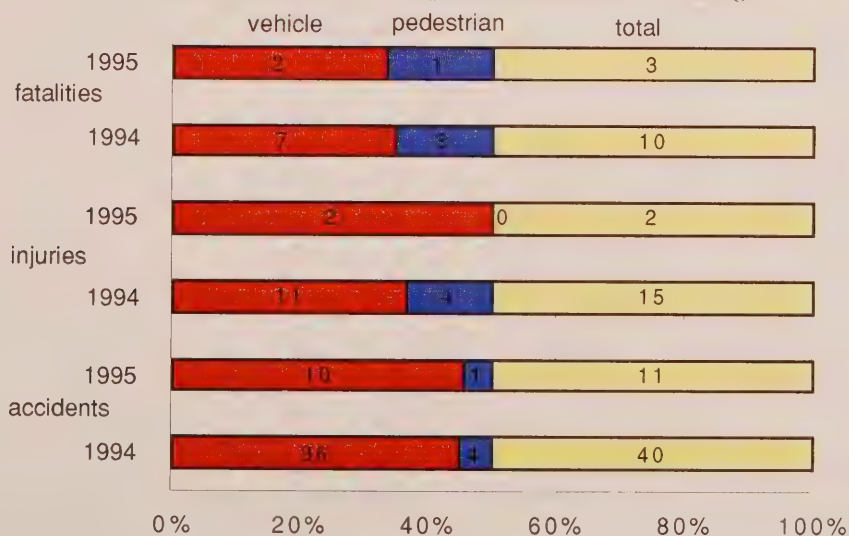


Pedestrian fatalities on-roadway decreased slightly during 1993 and 1994 on all roads.

This may be due in part to increased efforts by the Department, such as safety education programs for city youth and increased use of yield-to-pedestrian signs.



Fatalities, Injuries and Accidents: At-grade Railroad Crossings



At the time of this report, pedestrian and vehicle accidents at railroad crossings appeared to be on the decrease from 1994 to 1995.

Source: NJDOT Annual Safety Reports, 1993, 1994, 1995

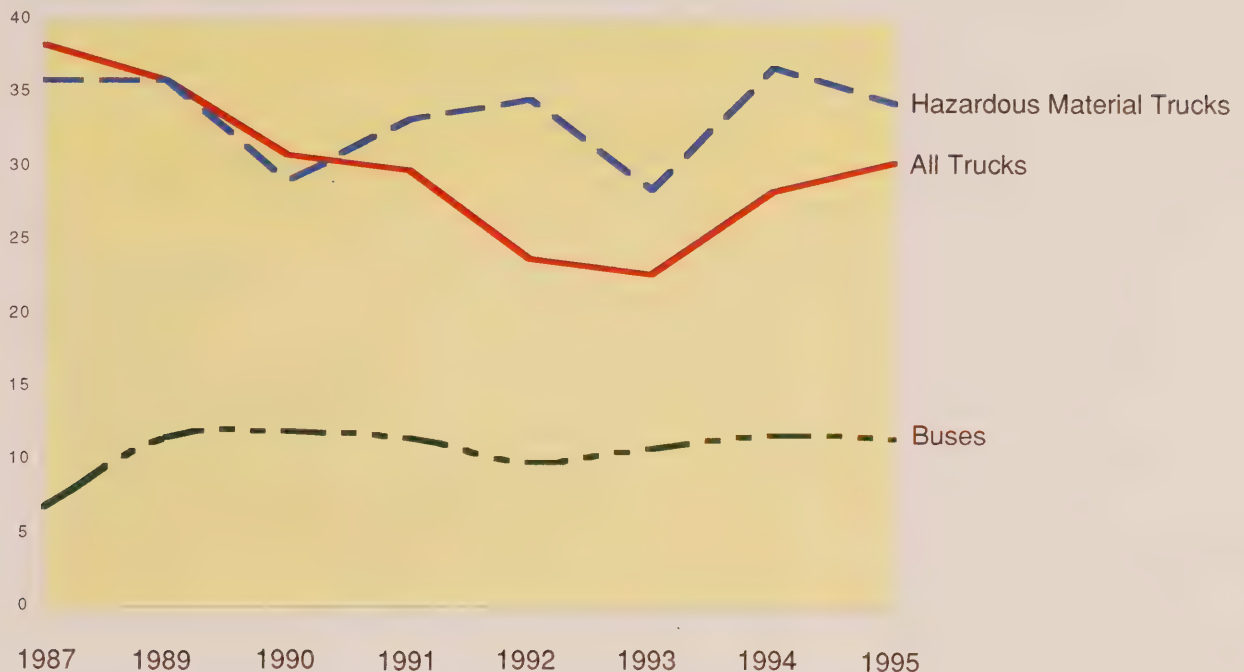
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SAFETY

Commercial Vehicles Removed from Service

(three year moving average)

Percent of vehicles
removed from service:



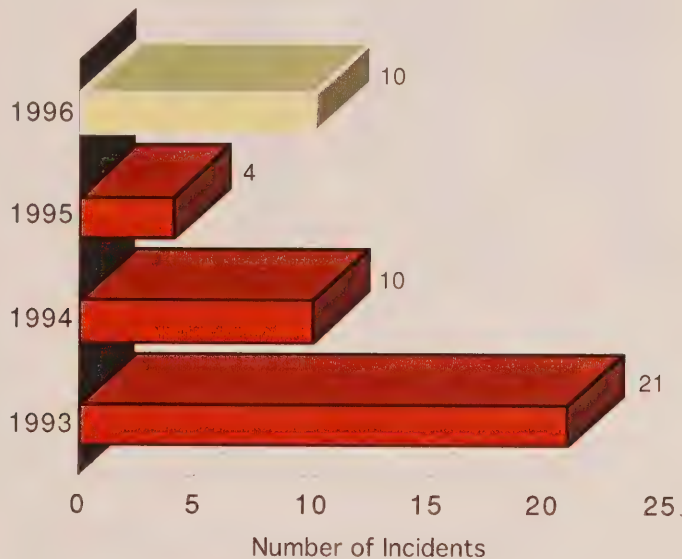
NJDOT and law enforcement agencies conduct roadside inspections of trucks and buses to assure vehicle safety and proper documentation. Vehicles can be placed "out-of-service" for certain mechanical difficulties which can cause spills or accidents. From a high of nearly 40% in 1987, in 1995 approximately one-third of all trucks were placed out-of-service, requiring immediate correction before continuance. Trucks carrying hazardous materials have a slightly higher out-of-service rate, due to increased checks of cargo and containers. NJ TRANSIT and privately operated buses are removed from service at a much lower rate, with only about 10% removed from service.

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SAFETY

NJDOT Work Zone Incidents

A "Work Zone" is defined as a work operation involving temporary traffic control. A work zone incident can be an accident, injury, near-miss or fatality which can involve non-DOT workers, DOT employee(s) or equipment in a work zone. An incident does not necessarily involve an injury or equipment damage. The figures shown below only indicate those incidents which are reported.

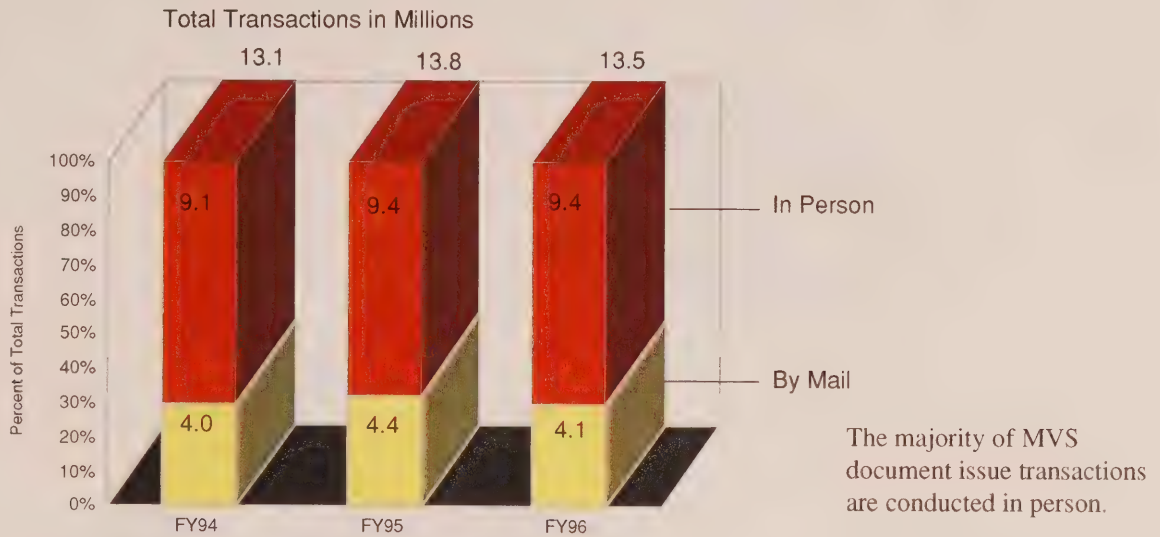


The number of work zone incidents has fallen, from a high of 21 in 1993 to 4 in 1995, the last complete year of data. However, ten incidents have already been recorded during the first three quarters of 1996.

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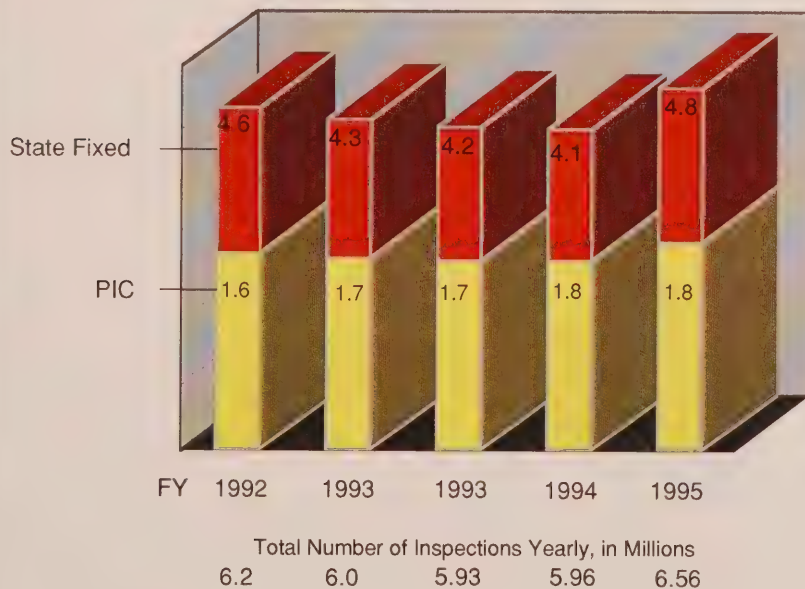
MVS OPERATING STATISTICS

MVS Transactions (documents issued only)



Source: MVS Planning Unit.

Vehicle Inspections at State Fixed and Private Inspection Centers (PIC)



Approximately six million vehicle inspections have been conducted each year since 1992, with FY 96 showing a marked increase. While fluctuations cannot be explained with certainty at this time, it is possible that customers may view private facilities as requiring more costly remedies than may be required.

Customer choice of inspection location has remained constant, with state inspection centers conducting at least twice as many inspections as private centers.

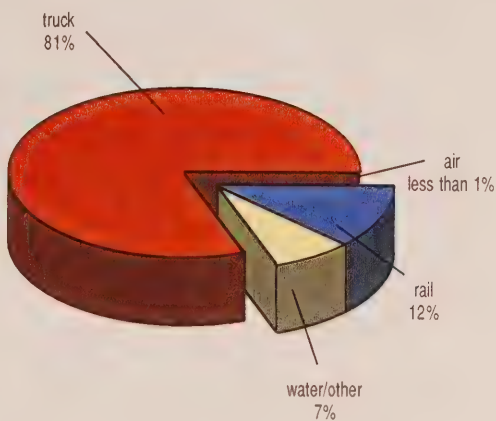
Source: MVS Planning Unit

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GOODS MOVEMENT AND MODAL CHOICE

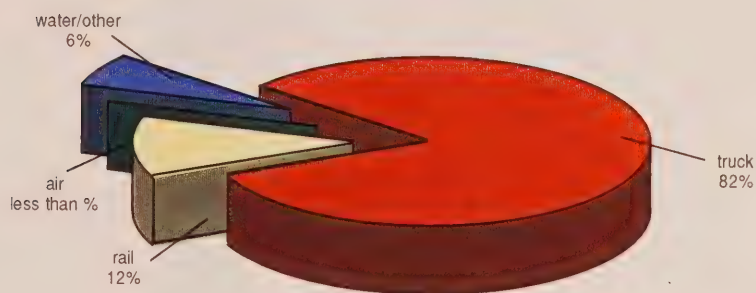
Trade Flows from the US into New Jersey

metric tons in percent



Trade Flows within New Jersey

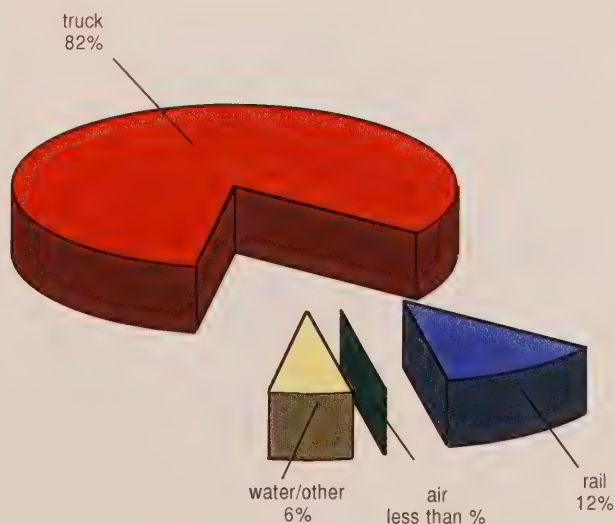
metric tons in percent



In 1995, trucking constituted the singlemost important mode for goods movement from the U.S. into New Jersey, within New Jersey, and from New Jersey to the U.S. Rail is the second largest carrier of goods in and out of the state.

Trade Flows from New Jersey to US

metric tons in percent



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GOODS MOVEMENT AND MODAL CHOICE

Number of Active Aviation Facilities

number of facilities:

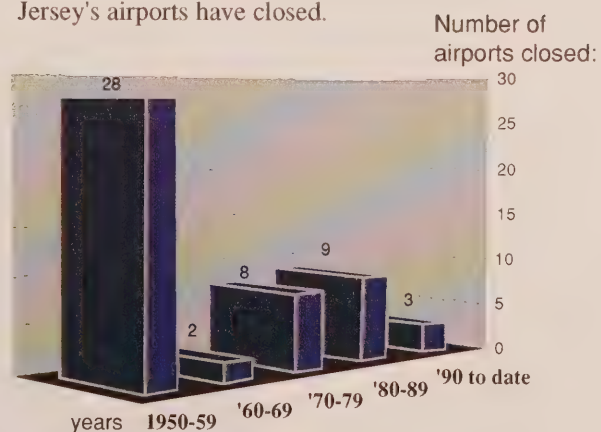


New Jersey's gross state product in 1996 was \$258 billion, the 8th largest in the nation. General aviation represents nearly 2%, or \$4.3 billion.

38 of New Jersey's 85 private airfields are restricted; while these facilities are available, use must be prearranged.

In 1996 New Jersey ranked 41st in the number of publicly owned airports.

Over the past 45 years, 50 of New Jersey's airports have closed.



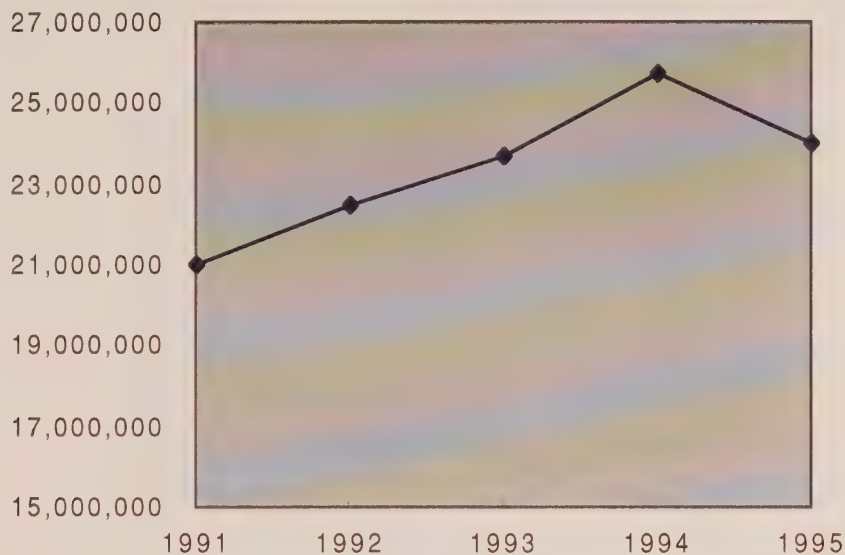
Over the next 10 years, US airports will experience a 40% increase in passenger traffic and an even larger increase in cargo.

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GOODS MOVEMENT AND MODAL CHOICE

Passenger Volume at Newark International Airport

total passengers:

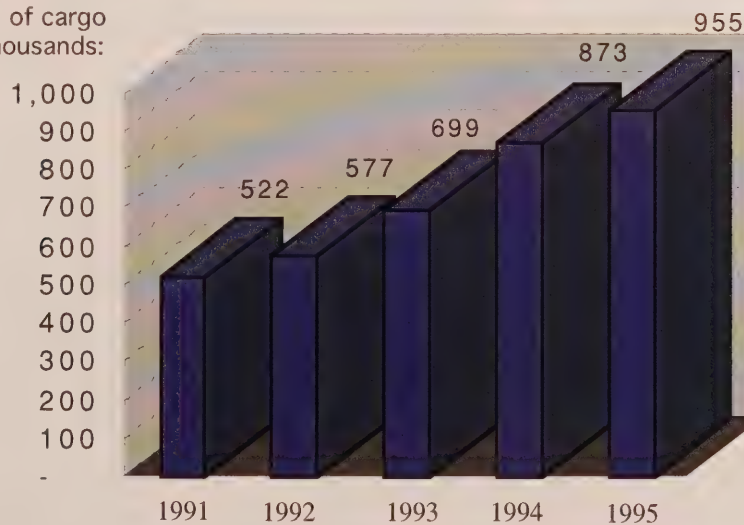


The nation's 30 major hubs carry 70% of the country's passenger volume. Newark International Airport passenger volume increased each year since 1991, but declined from 1994 to 1995.

Air cargo volumes have grown significantly since 1991. Expansion of the air cargo carrier industry, particularly integrated carriers such as Federal Express, contributed to this growth. As most air cargo is carried on passenger flights, there is a direct link between the health of commercial airline and air cargo economies.

Cargo Volume at Newark International Airport

tons of cargo
in thousands:



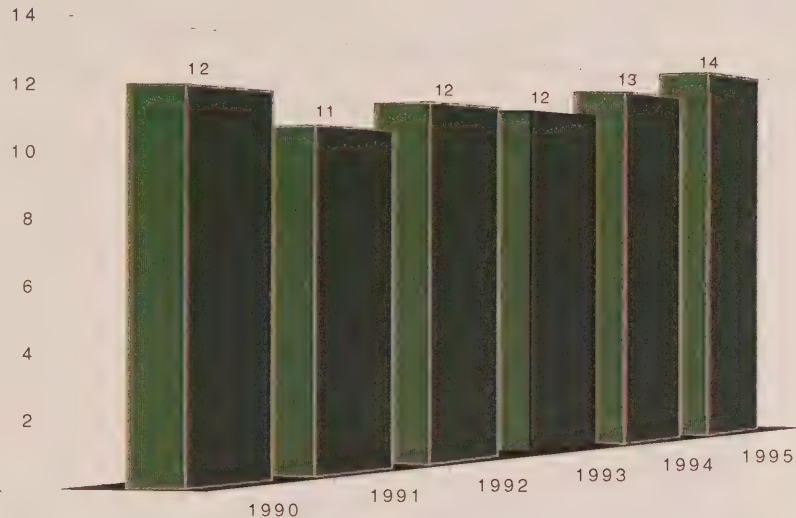
Source: PANY&NJ "Airport Traffic Report, 1995"

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GOODS MOVEMENT AND MODAL CHOICE

Marine Cargo Handled Through Northern New Jersey Ports

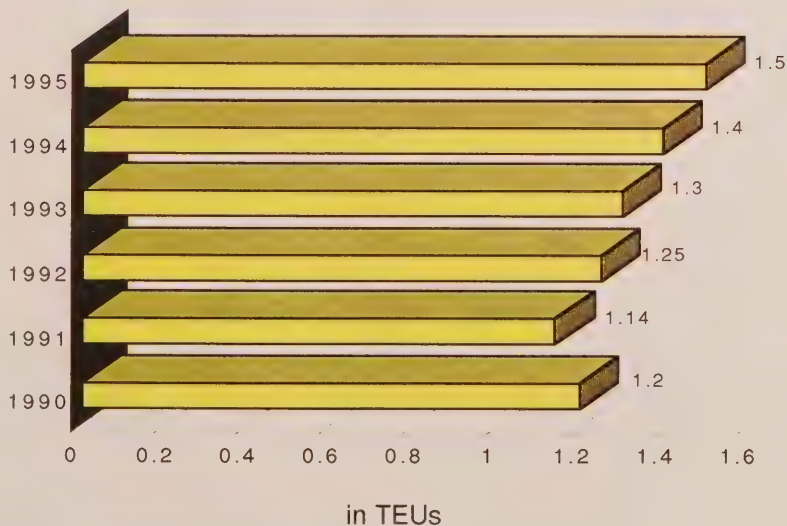
In Millions of Tons:



Since the national recession in 1991, recorded tonnage has increased 25% in northern New Jersey ports. The end of the recession, and increased trade with China and Korea (which use New York to reach US markets rather than California) account for this growth.

Marine container volume, measured in twenty-foot-equivalent units, (or TEUs) has grown 32% since 1991 for the same reasons.

Marine Container Volume Handled Through Northern New Jersey Ports



Source for both: PANY&NJ Oceanborne Foreign Trade Handbook, 1995

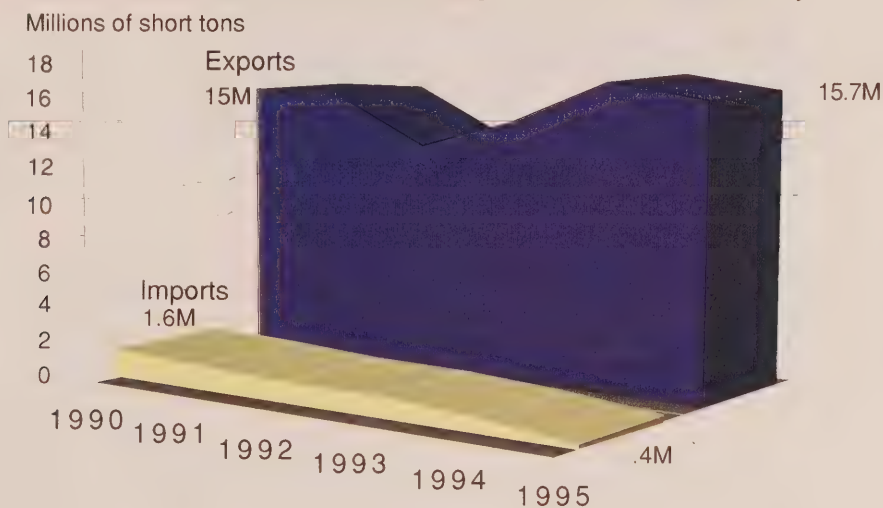
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GOODS MOVEMENT AND MODAL CHOICE

In 1993, New Jersey and Pennsylvania's governors signed an agreement unifying the Ports of Philadelphia and Camden, to increase the international competitiveness of the region's ports.

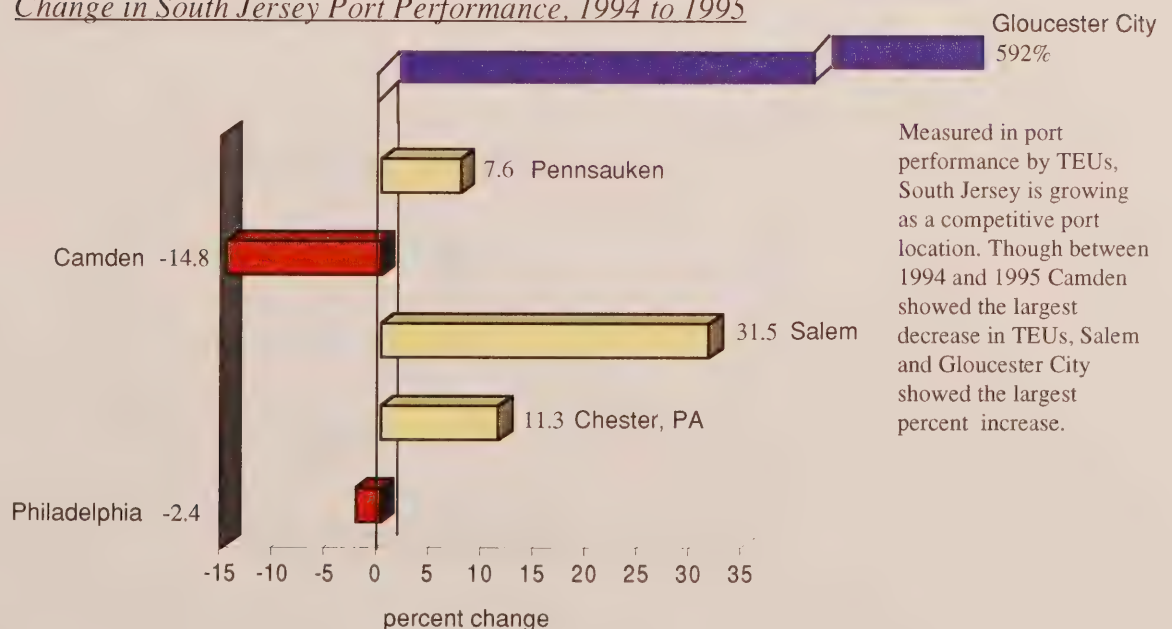
The Ports are the leading destination for steel shipments to the Northeast U.S., with about two-thirds of all U.S. automobile and transportation equipment manufacturing located within 1,000 miles of the port. The Ports are also conveniently positioned to serve over half of all US publishing. Channel depth is maintained by standard dredging operations -- approximately 5 million cubic yards annually -- to accommodate the ever-increasing size and number of vessels.

Cargo Imports & Exports Through Southern New Jersey Ports



South Jersey ports consistently generate far more export activity than import activity. Imports measured in short tons have declined markedly over the six years shown, while export short tons have remained relatively constant.

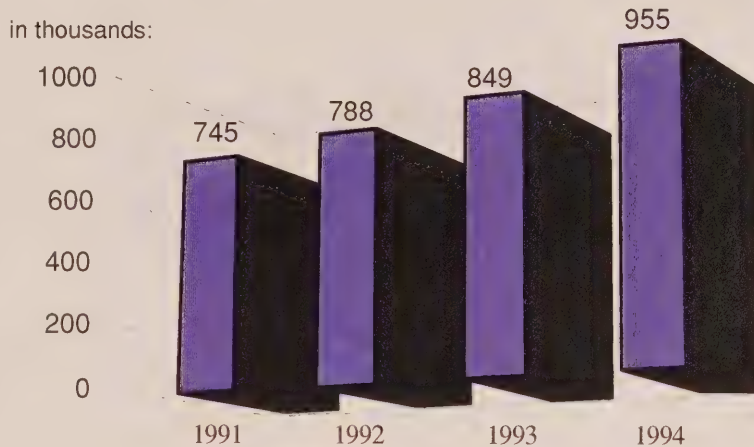
Change in South Jersey Port Performance, 1994 to 1995



1997 Annual Report on Conditions and Trends

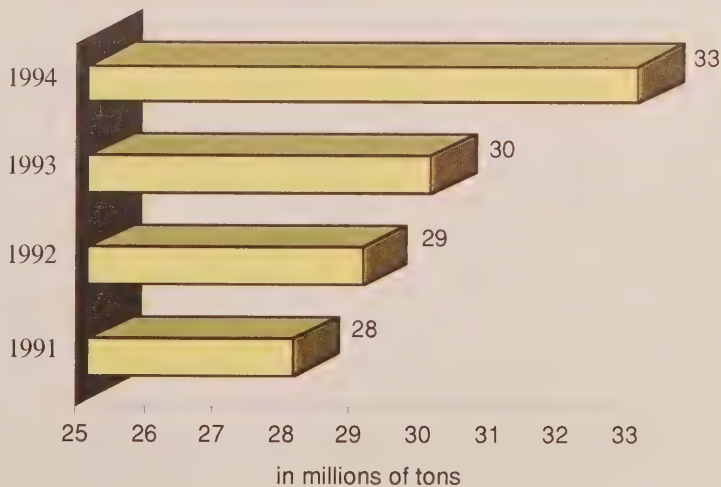
GOODS MOVEMENT AND MODAL CHOICE

Freight Railcars Handled



Rail freight activity in New Jersey has grown since the 1991 recession. The state network is operated by 12 rail carriers, including CONRAIL, the New York Susquehanna and Western, and other smaller railroads. The number of railcars handled across the state network grew by nearly a quarter of a million, or 28%, between 1991 and 1994. Tonnage also grew about 16% during this same period. Much of this growth can be linked to improving national and regional economies, and strategic public and private investments. NJDOT has invested approximately ten million dollars through the State Rail Program.

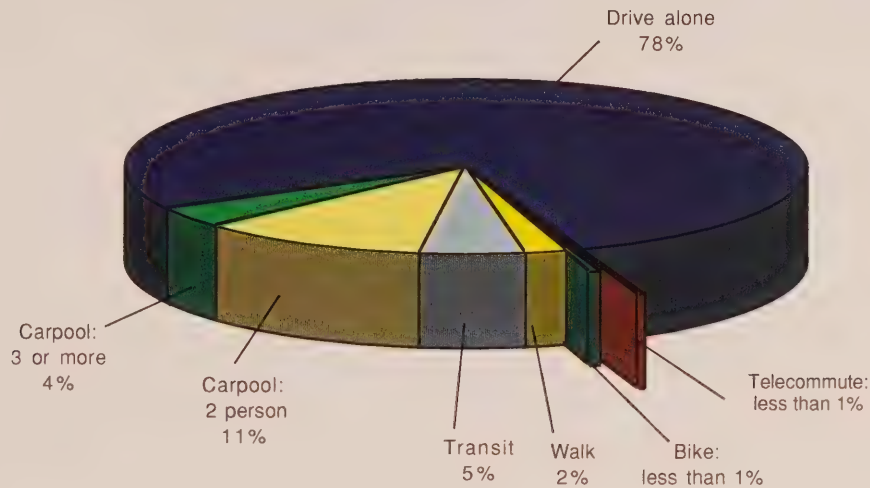
Rail Freight Handled



1997 Annual Report on Conditions and Trends

GOODS MOVEMENT AND MODAL CHOICE

Modal Choice: Journey to Work



Driving alone is still the overwhelming choice for those who work, even though the options for walking, biking and telecommuting are growing. The number of workers who currently use these three alternatives is fast approaching the number who use transit, or travel in carpools containing three or more passengers.

Source: *Journey to Work Characteristics, 1990 Census*

Average Vehicle Occupancy:

Employee Trip Reduction Program Findings

Eighteen of New Jersey's counties are in non-attainment areas with respect to federal air quality requirements. Random telephone surveys are conducted on a two-year cycle to meet EPA Employee Trip Reduction requirements. Preliminary indications of the 1996 survey revealed that over the past four years the average vehicle occupancy in the state is declining slightly.

Source: *Transportation Systems Planning, NJDOT*

II. TECHNICAL SUMMARY: "THE COOKBOOK"

The *1997 Annual Report on Conditions and Trends* contains information on transportation conditions and trends in the state, reflected in approximately 30 measures categorized by six major categories of departmental activity: Infrastructure, Maintenance and Operations, Safety, MVS Operating Statistics, and Goods Movement and Modal Choice.

Future Annual Report Considerations

Data for each measure was first entered in Excel, to devise a spreadsheet format. Graphic charts were then generated in the same program. Each final graphic was then imported into a standardized template which was formatted in Pagemaker.

The most critical immediate task NJDOT must address is how to collect and store the data with which future reports will be generated. It is critical that each measure be thought through in terms of its component parts of data, so that as full of a picture can be created as possible for that measure. In simple terms, this means defining aspects such as total numbers, component numbers, and whether fiscal year or calendar year.

The goal is to collect enough of the right information so that a measure can be illustrated beyond simple units, to show more complex information such as percentages, and relationships such as costs to benefits. For example, the total number of pavement miles, as well as a breakdown of interstate vs. non-interstate, should be provided when assessing pavement condition. "Number of" and "Cost of" are extremely useful measures. When possible they should be provided together, as one is not necessarily more important than the other, and both provide the necessary information to determine policy tradeoffs of one over the other.

INFRASTRUCTURE

Six measures were used to define infrastructure: pavement in state of good repair; structurally deficient bridges, load posted bridges and deck condition of state bridges under state jurisdiction. Bridge condition was broken out to distinguish deck condition, from structural deficiency to load carrying capacity, to give a true picture of "bridge condition."

Interstate Pavement in "State of Good Repair"

Source: Pavement Management System, NJDOT
Biennial Pavement Condition Survey

The Department presently defines pavement condition by a complex process. NJDOT Pavement Management System (PMS) assesses condition through a combination of measures -- including pavement rutting, surface distress index, a final pavement rating and the ARAN ride quality index. A final pavement rating between 0 and 5 is interpreted to be 0-1 as indicative of "very poor", and 4.01 - 5 as being "very good".

The complex methodology makes this measure difficult to translate simply for the public, yet this is a measure the public would be interested in. Data timeliness is also an issue -- as the survey is conducted every two years, annual reporting will be difficult.

Structurally Deficient State Bridges

Source: Structural Evaluation and Bridge Management, NJDOT
NJDOT Safety Management System produces an Annual Safety Report for each fiscal year.

Data timeliness is an issue, as survey is conducted every two years; some bridges are inspected more frequently, depending on condition. Data is available by state highway, county/municipal and special jurisdictions. Dollars invested should be added to make the figures more meaningful.

State Load Posted Bridges

Source: Structural Evaluation and Bridge Management, NJDOT
Biennial Bridge Condition Survey

When the structural integrity of a bridge affects its load carrying capacity, the bridge is posted. A bridge is also posted, however, as a means to control truck access. The Department has very few load posted bridges. The number of load posted bridges has declined slightly over the past five years, but the data should be clarified to indicate whether load posted bridges are the same year to year or if they are different.

Data timeliness and accuracy are issues. Bridge inspections are conducted every two years, making an assessment of current condition difficult. According to Bridge Management, however, some bridges are inspected more frequently, if condition demands. This aspect should be reported as part of the overall reporting.

Substandard State Bridge Decks

Source: Structural Evaluation and Bridge Management, NJDOT
Biennial Bridge Condition Survey

Data timeliness is an issue, as survey is conducted every two years; some bridges are inspected more frequently, depending on condition. Dollars invested should be added to make the figures more meaningful.

Total Highway Miles by Ownership, and Total Congested Miles, by Functional Classification

Source: USDOT FHWA statistics, Table HM-1, selected years (Annual Report); NJDOT Bureau of Data Development (Jim Carl)

NJDOT Bureau of Data Development generates estimates of congestion from sample monitoring sites around the state.

Trend analysis must take into account data from 1993 to present is different from previous years, due to a request for reclassification of rural and urban highways by local governments after the 1990 Census. "Congested miles, by ownership" cannot presently be calculated -- 'total congested miles' is based on a selected sample. Ownership is a separate category of data collection.

MAINTENANCE AND OPERATIONS

Data for these measure is collected primarily within NJDOT's Bureau of Maintenance Engineering and Operations. Six measures were used to indicate maintenance and operations -- litter removal (two measures), roadway repair, snow preparedness and signal operations. Most data is reported/updated monthly except those which are seasonal. (Snow preparedness and mowing)

Hours of Litter Removal:

Source: Bureau of Maintenance Engineering and Operations (IB Senyk)
Data collected monthly, by fiscal year.

Data available is not consistent, making a graphic representation difficult. Hours of litter removal are recorded for maintenance forces but not tons; tons of litter picked up is recorded for Department of Corrections prisoners but not hours. The graphic represents the only common reporting -- hours worked. Dollars invested should be added to assess the cost-benefits of two different approaches.

Adopt-a-Highway Locations

Source: Bureau of Maintenance Engineering and Operations
Data collected annually.

NJDOT does not keep data on the total miles or length of roadway in the Adopt-A-Highway program. The average length shown was devised as a general indication for the initial annual report effort.

Bituminous Patch Used

Source: Bureau of Maintenance Engineering and Operations
Data collected monthly.

Data is very current and easily accessible. Next year the effects of "Pothole Pete" should be called out. It should be noted that initiatives such as these may actually make the data "look worse" for a while, so it will be important to provide a more complete picture -- for example, does the public feel that this is a worthwhile effort?

Snow Preparedness: Full and Partial Mobilizations

Source: Bureau of Maintenance Engineering and Operations
Reports produced every two weeks during season.

Bureau of Maintenance Engineering and Operations can provide data on number of mobilizations every two weeks during the season. The NJDOT Snow Room should be consulted instead because they can provide a more in-depth picture -- by both region and statewide -- salt tonnage, material, overtime, salary, equipment, cost, contract dollars, total dollars spent and the number of full and partial mobilizations. Storm usage estimates were provided for FY 96.

Signal Callouts

Source: Bureau of Maintenance Engineering and Operations, NJDOT
Data collected annually, by FY.

The Bureau of Maintenance Engineering and Operations broadly defines callouts -- lighting callouts include lighting on highways, signs and drawbridges; and signal callouts include lampouts, knockdowns, timing problems and twisted fixtures.

An accurate representation must include the total number of signals maintained per year. Callouts fluctuate for many reasons within and outside of the Department's control.

Computerized Integration of Traffic Signals

Source: ITS Engineering (Tom Fuca)
Data collected by special request for Annual Report effort Data collected by CY.

ITS Engineering maintains a database of approximate miles by route number, phase of work (programmed, in design, in construction, in construction substantially complete and date of final acceptance.) ITS can also report data on MAGIC separately.

This measure reports progress on a Departmental initiative to improve and upgrade traffic signalization. ITS has set internal goals over the next five years (construction of 308 miles of signalization over the next five years).

CAPITAL PROGRAM

Four areas of measure were defined for the Capital Program -- Capital support in state initiatives (projects and investment in the State Development and Redevelopment Plan); contract awards, (including procurement of DBE services); pipeline delivery efficiency, and capital program trends (funding source and program allocation). Most information was provided by Capital Programming, Budget and Finance and Administration.

Dollar Value of Capital Program Programmed in the State Budget

Source: Capital Programming (Richard Stoolman)
Data compiled from FY computerized databases used to develop STIP

Capital Programming has recently completed program category changes which make the Capital Program categories consistent since 1992. Shows what has been programmed by fiscal year, but does not show result. Many other insightful suggestions were made about potential capital program measures for later reporting -- for example, Jack Lettiere suggested contrasting this to "obligated" and "delivered" as a truer measure of the Department's performance.

Active Capital Program Project Schedule Status

Source: Capital Projects Status Reports (John Canepari)
Reports produced monthly

Data produced monthly for previous month; for Annual Report relevant data must be reconstituted into yearly figures. Active Capital Program project managers have the opportunity to adjust schedules prior to each monthly report; therefore, effectiveness of measure can be skewed

Construction Contracts Awarded

Source: Bureau of Construction Services, Division of Procurement
Number of contracts and dollar value collected by fiscal year, by quarter. Data provided as part of Quarterly Reports to the Governor.

Currently Bureau does not track average timeframe from selection to execution because other groups involved. Bureau suggested 30 day estimate. If data tracked what is causing delay (internal or external) this could be a useful and interesting measure.

Professional Services Contracts Awarded; Average Time from Selection to Agreement Execution

Source: Division of Procurement, Department of Finance and Administration
Data collected by special request for Annual Report effort.

The number of contracts and dollar value was generated by CY by quarter from 1991 to present. This measure merits further refinement, as it measures the effectiveness of a recent department initiative.

Procurement of Disadvantaged Business Enterprise (DBE) Services

Source: Division of Civil Rights/Affirmative Action (Anthony Davis)
Data collected monthly for Monthly Report: DBE Program Highlights.

Federal and State goal attainment are easily assessed with the current system. NJDOT must prepare monthly reports on goal attainment to fulfill Federal requirements for federally funded projects. Equivalent State goal setting and reporting are not required, but NJDOT sets its own internal goals for state-funded contracts.

Programmed Projects and Investment in State Development and Redevelopment Plan (SDRP) centers:

Source: Divisions of Capital Programming and Planning (Richard Stoolman, Neil Longfield and Susan Weber)

Planning evaluates and rates Capital Program projects for relevance to SDRP. Capital Program provided for each fiscal year data base which contained fields for county and municipalities where each project is located. Graphic prepared by reviewing Capital Program data base for each fiscal year -- highlighting designated center projects for that year and all previous years, as the number of centers theoretically increases each year.

SAFETY

Driver and/or pedestrian safety was measured in three areas -- on roads and at-grade crossings, to NJDOT employees during work, and to motorists (commercial vehicles removed from service).

Pedestrian Fatalities and Injuries On-Roadway

Source: Bureau of Accident Records (Steve Warren)

Injuries and fatalities are collected by road classification, and distinguished by 'on-road' v. 'off-road' are kept annually in the "Summary of Motor Vehicle Traffic Accidents". These reports are also known as "29 Reports," and are compiled with data drawn from police accident reporting.

Fatalities, Accidents and Injuries at Grade Crossings

Source: NJDOT Annual Safety Reports. Steve Warren suggests speaking with Donna Troiano, Manager, Bureau of Utilities, for this information in the future.

Grade crossing accidents, injuries and fatalities, are kept annually by NJDOT in "Annual Safety Reports" and are distinguished between vehicular and pedestrian incidents.

Commercial Vehicles Removed from Service

Source: Bureau of Freight Services (Ted Matthews)

SafetyNet reports are produced quarterly for NJDOT, and used to fulfill federal reporting purposes.

NJDOT Work Zone Incidents

Source: Safety Office, Department of Finance and Administration (Anthony Pellegrino)

Data is collected quarterly. The figures shown do not include MVS.

Over the years, the Bureau has been asked to provide statistics in various formats to satisfy various requests. The Department currently uses a nationally recognized standard, "accidents per 200,000 hours worked."

MOTOR VEHICLES SERVICES OPERATING STATISTICS

Motor Vehicle Services (MVS) Document Issued Transactions

Vehicle Inspections at State-Fixed and Private Inspection Centers

Source: Planning Unit, MVS (John Moraine)

Unit produces a monthly report which contains a wealth of information and potential future measures; however, at the time of the 1997 report, MVS did not monitor waiting time, which is a critical component of measuring public satisfaction]faction with MVS's services.

GOODS MOVEMENT AND MODAL CHOICE

General goods movements characteristics, and each of the major goods movements modes were highlighted -- air, sea, rail. Truck measures should be developed in the future. Modal choice is measured by two measures -- journey to work, and average vehicle occupancy.

GOODS MOVEMENT: *Trade flows to, from and within New Jersey*

Source: Goods Movement Data Base; Bureau of Ports, Terminal & Freight Services. Goods Movement data base (GMDB) is part of the Bureau's Intermodal Management System.

GMDB was custom-created by outside vendor using 1995 as a benchmark, and is generally not compatible with other studies done by NJDOT in the '80s.

Goods Movement Activity, by Mode:

AIR: *Active Aviation Facilities in New Jersey; Airport Closures*

Source: Division of Aeronautics (Jack Penn); FAA Statistical Handbook

The Division of Aviation produces its own annual report. At the time of this report, plans for developing similar reporting for goods movement and billboards were underway.

Passenger and Cargo Volumes, Newark International Airport

Source: Port Authority of New York and New Jersey Aviation Department (Steve Larsen, 212. 435.3710)

Airport Traffic Report, 1995, Table 3.2.1"

SEA: *Marine Cargo and Container Volume Handled Through Northern New Jersey Ports*

Data contained in Oceanborne Foreign Trade Handbook. This data only reflects Northern New Jersey ports under the jurisdiction of PANYNJ (Port Newark, Elizabeth Marine Terminal)

Cargo Imports and Exports

Change in South Jersey Port Performance, Southern New Jersey Ports

Data obtained from the Port of Philadelphia and Camden, Inc.
(Jose Brignoli 215-427-8308)

Ports produces an Annual Report, from which some of the data was obtained (facts and figures on each of the terminals) They also provided, on request: exports and imports by commodity in short tons and dollars for 1990-95 (extracted from Census), and container TEUs for '94 and '95 (Journal of Commerce PIERS)

Comparisons between north Jersey and south Jersey ports are problematic as facilities are very different. Data will need to be recreated each year unless NJDOT actively coordinates with Ports for data. To save dollars for the Annual Report effort, existing data was used; for example, Ports has three years of data on hand for TEUs. Ports pays approximately

\$100,000 yearly to receive data files (over 5,000) on CD ROM. This began in mid 1996. NJDOT could share in Ports-paid data requests if they make their wishes known to Ports. Census data for containers are considered unreliable, although the total tonnage data is considered reliable.

RAIL: *Freight Railcars Handled*
 Tons of Rail Freight Handled

Source: AAR, Railroads, Legislation and Economics Department
 (Bill Brennan, AAR, 202. 639.2324 or Internet address (www.aar.org))

The 1991-93 data is from AAR; 1994 or most current year available can be obtained from the AAR website or in published annual reports. Data lags two years behind.

MODAL CHOICE: *Journey-to-work modal split*

Source: US Census data

This is a good general statistic; however the data is generated only every ten years, so supplemental statistics should be included from other sources.

Average Vehicle Occupancy (AVO): Employer Trip Reduction
Source: Planning, for ETR (Noreen Cardinali); Systems Planning, from
 CMS network

III. CUSTOMER SATISFACTION SURVEY

In addition to the internal data collected by the Department for use in the *1997 Annual Report*, a customer satisfaction survey was conducted to provide initial measures of performance for those key department activities where data was not available at the time, and to provide additional insight on customer perception of the Department's performance in key transportation activities.

This report on customer satisfaction uses the results of three separate customer satisfaction surveys, all of which were conducted by the Eagleton Institute:

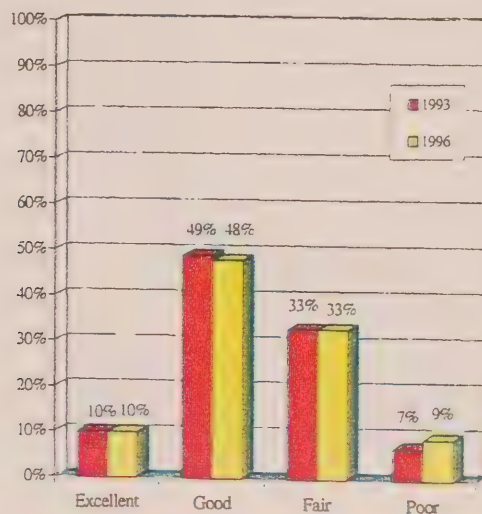
- A 1993 NJDOT Baseline Survey. This was the first customer satisfaction survey, conducted as part of the NJDOT long range plan, *Transportation Choices 2020*.
- A 1995 NJTransit Study. This included several of the same questions used in the 1993 Baseline Survey, as an update.
- A 1996 NJDOT Survey. This included some questions from the 1993 Baseline survey, plus some new questions developed during the NJDOT Annual Report process.

While each survey was not identical, care was taken to assure that there was consistency between them. For clarity, each of the graphs which follow reference the survey(s) used. Some graphs compare the results of the 1993 and 1995 surveys, while other graphs compare the results of the 1993 and 1996 surveys.

The 1996 survey was intended to serve as a baseline for future customer satisfaction surveys. Comparison between surveys will allow NJDOT to measure the effectiveness of its strategies to meet stated goals and objectives from the perspective of its customers. As new strategies and goals are developed, future surveys can be changed to include additional questions and topics.

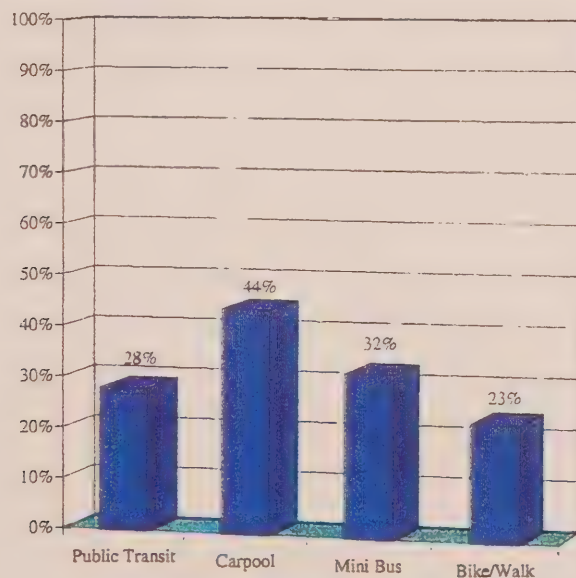
1996 NJDOT REPORT ON CUSTOMER SATISFACTION

HOW DO YOU RATE NEW JERSEY'S ROADS? 1993 and 1996



New Jersey residents rated the quality of New Jersey's roads about the same in 1993 and 1996. About 60% think that roads are excellent or good.

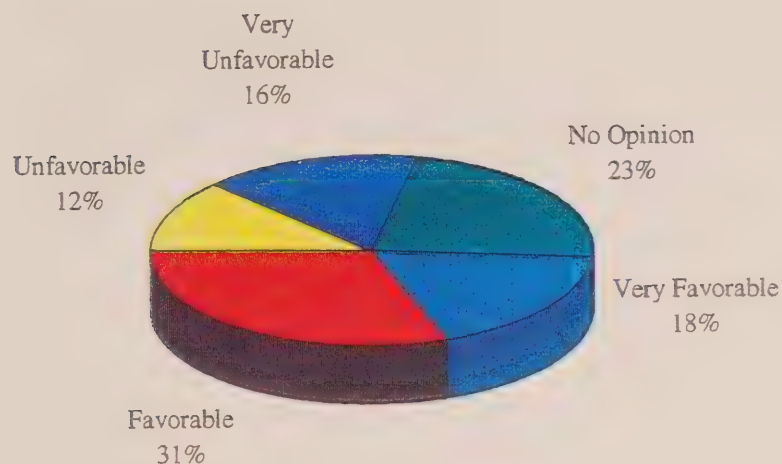
ALTERNATE MODES THAT DRIVERS WOULD CONSIDER 1996



Many New Jersey drivers are willing to consider using alternative modes, with just under one-half willing to consider carpools, and over one-quarter willing to consider transit.

1996 NJDOT REPORT ON CUSTOMER SATISFACTION

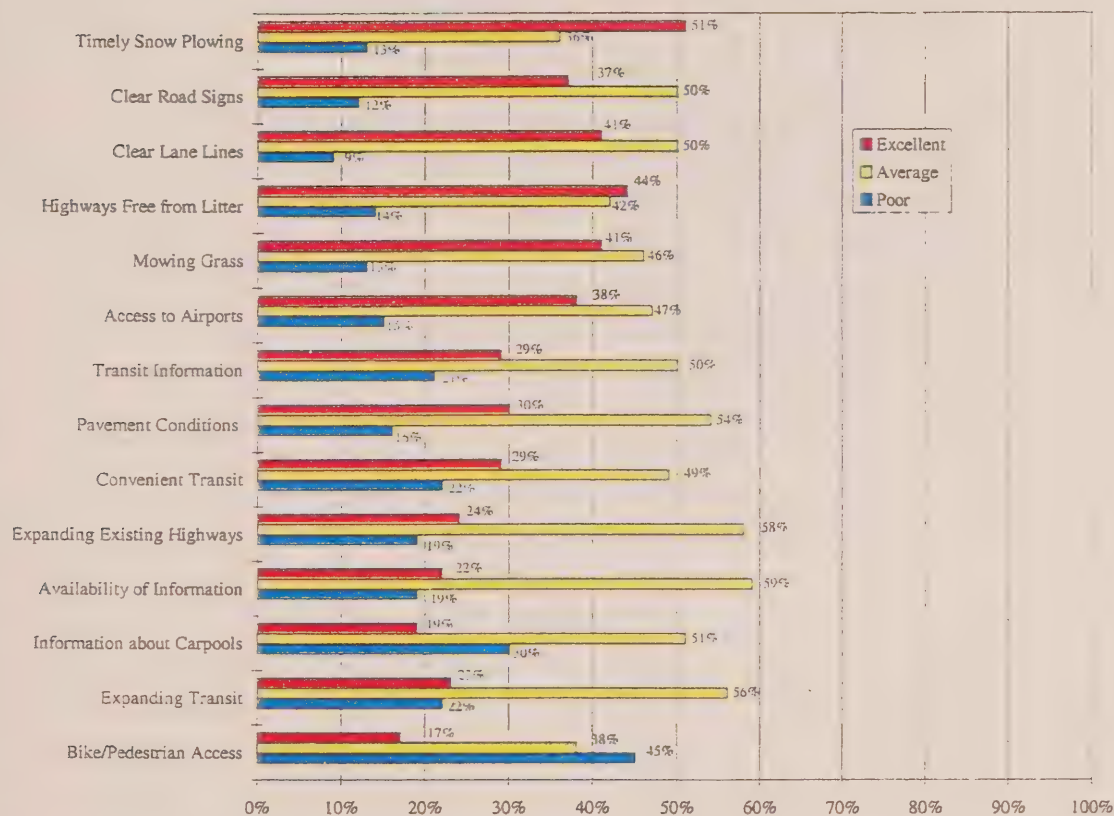
HOW DO YOU VIEW THE MOTOR VEHICLE SERVICES DIVISION? 1996



New Jersey residents were asked to rate their experiences with the Motor Vehicle Services of NJDOT. About one-half of residents had a positive opinion about Motor Vehicle Services and one-third had a negative opinion.

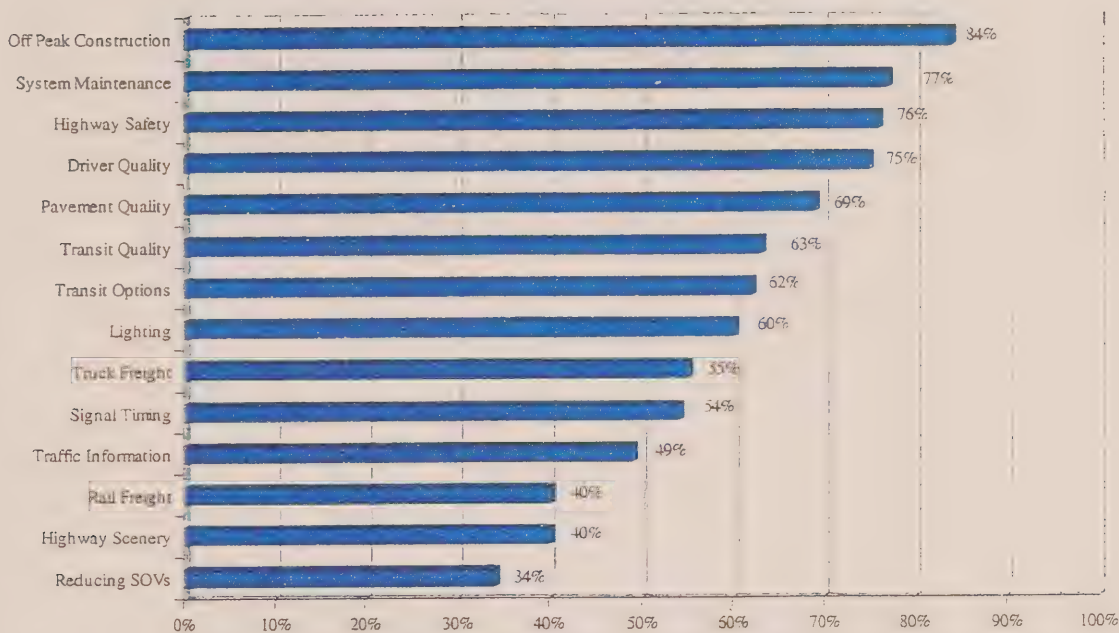
1996 NJDOT REPORT ON CUSTOMER SATISFACTION

NJDOT JOB PERFORMANCE RATING (PERCENTAGE OF NJ RESIDENTS WHO RATE NJDOT PERFORMANCE EXCELLENT, AVERAGE, OR POOR IN THE FOLLOWING AREAS) 1996



1996 NJDOT REPORT ON CUSTOMER SATISFACTION

PERCENT OF NEW JERSEY RESIDENTS SAYING ACTIVITY SHOULD BE A PRIORITY FOR NJDOT 1996

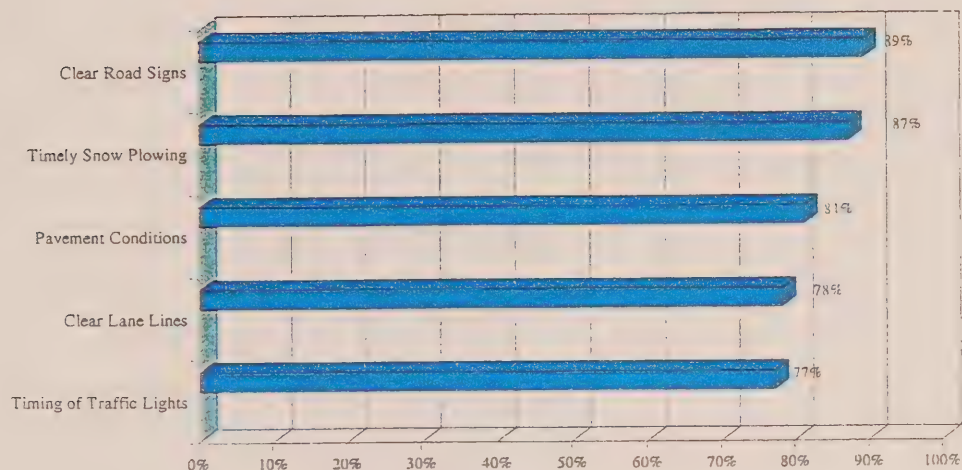


In 1996, New Jersey residents were asked to rank 14 separate NJDOT activities on a scale of 1-10 with 10 as a high priority. This graph shows the total percent of residents who ranked the activity "high priority". This list of activities is slightly different from the list used in the 1993 and 1995 surveys, so there is no comparison with those surveys.

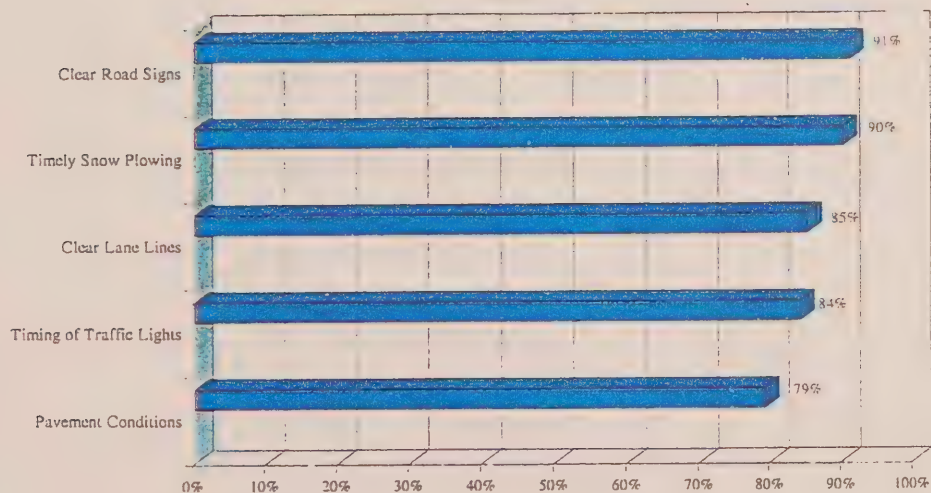
1996 NJDOT REPORT ON CUSTOMER SATISFACTION

5 TOP RANKED NJDOT ACTIVITIES 1993 and 1995

1993



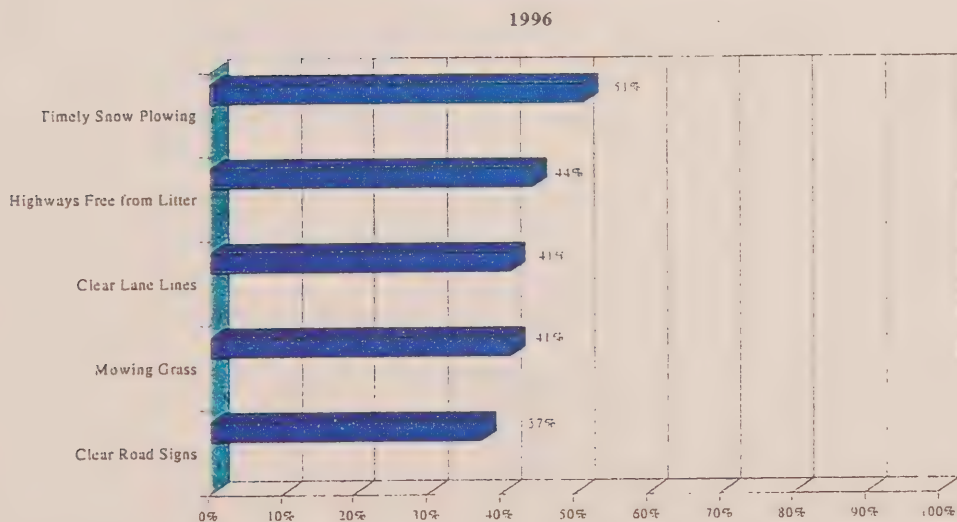
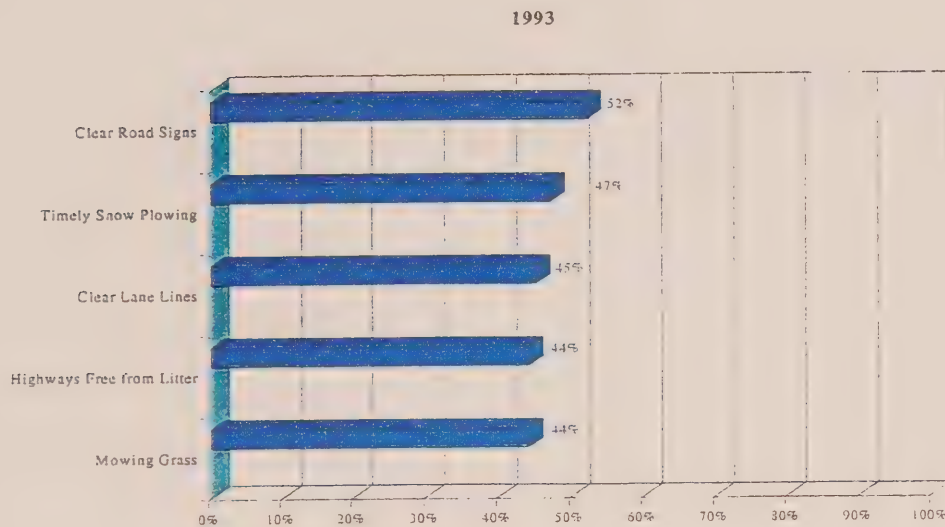
1995



In 1993 and 1995, 17 NJDOT activities were evaluated by New Jersey residents. These graphs show the five activities that received the highest percentage of "Priority" ratings in each survey by the residents. The five priorities are the same in each survey, but the order changed slightly.

1996 NJDOT REPORT ON CUSTOMER SATISFACTION

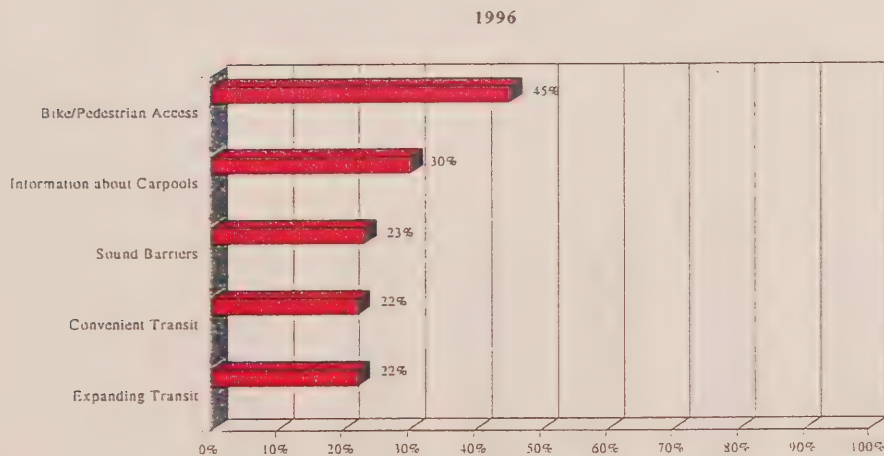
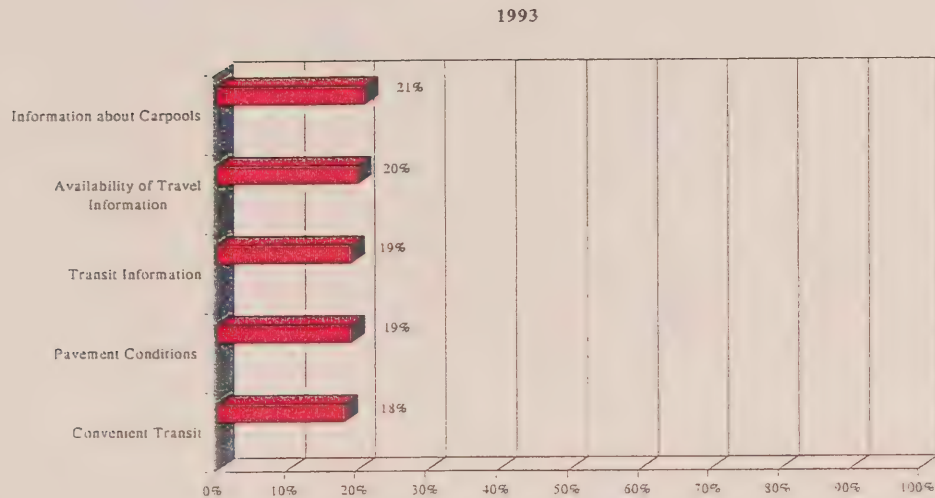
AREAS WHERE NJDOT WAS DOING AN EXCELLENT JOB - 5 ACTIVITIES WITH HIGHEST PERCENTAGE OF "EXCELLENT" RATINGS 1993 and 1996



New Jersey residents were asked to rate NJDOT's performance in 17 areas. These graphs show the five areas that received the highest percentage of excellent ratings by the residents. The five areas that residents think NJDOT is doing an excellent job have not changed over the past three years, although there is change in the order between 1993 and 1996. Three of these areas, "Timely Snow Plowing," "Clear Lane Lines," and "Clear Road Signs," were ranked as top five NJDOT priorities. The biggest change is the drop, from 52% to 37%, in the percentage of people rating "Clear Road Signs" as excellent.

1996 NJDOT REPORT ON CUSTOMER SATISFACTION

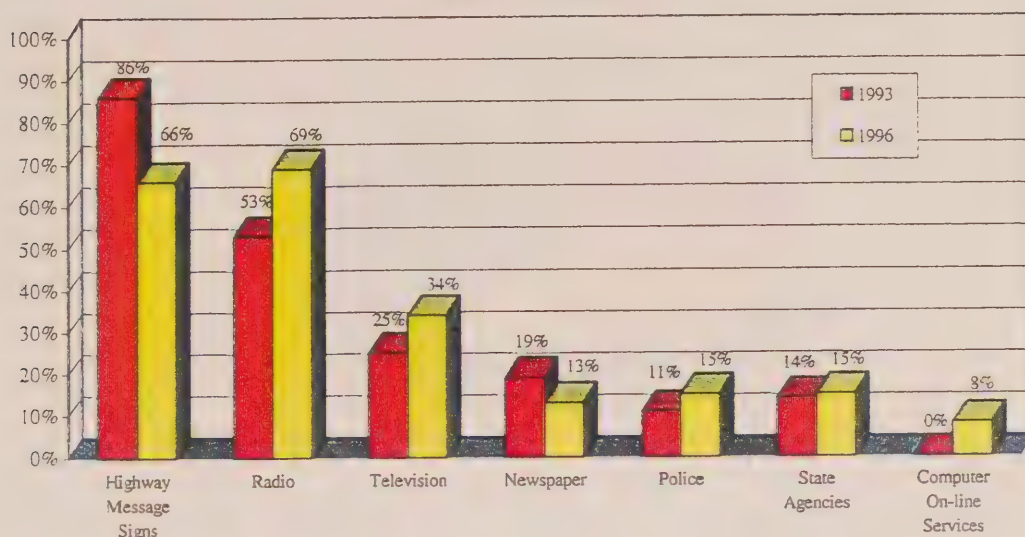
AREAS WHERE NJDOT WAS DOING POOR JOB - 5 ACTIVITIES WITH THE HIGHEST PERCENTAGE OF "POOR" RATINGS 1993 and 1996



New Jersey residents were asked to rate NJDOT's performance in 17 areas. The graphs show the five areas that received the highest percentage of poor ratings. In 1996, two questions were added concerning bicycle/pedestrian access and expanding transit options. In 1996, four out of the five "Poor" areas deal with alternative transportation modes.

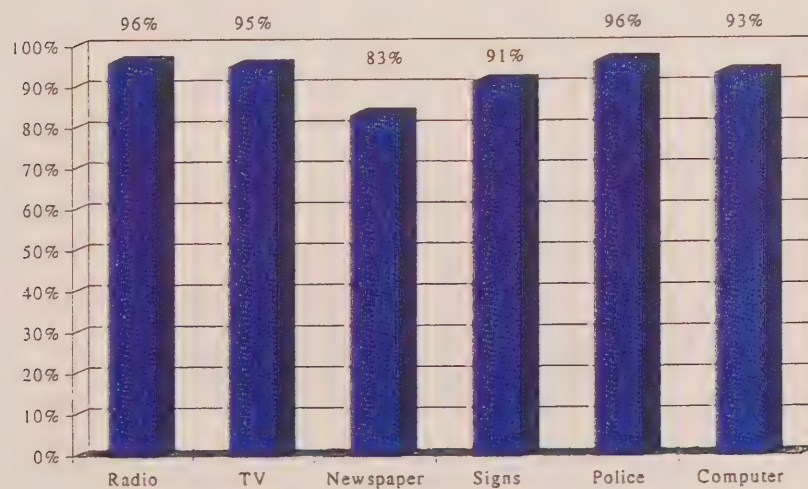
1996 NJDOT REPORT ON CUSTOMER SATISFACTION

WHERE DO YOU GET YOUR TRAVEL INFORMATION? 1993 and 1996



Compared to the 1993 survey, fewer residents in 1996 are relying on highway message signs and newspapers, and slightly more are using radio and television reports. The number of residents using computer on-line services is also growing.

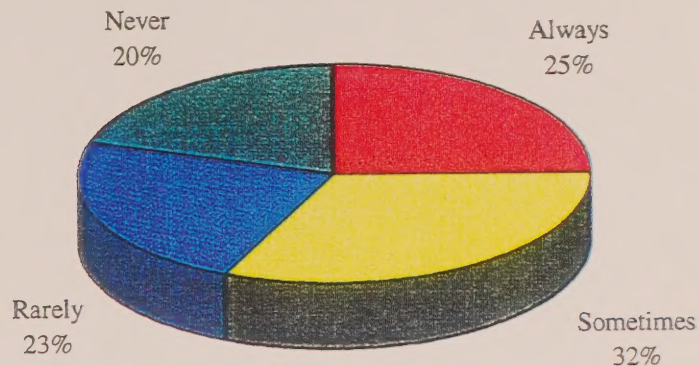
HOW ACCURATE IS THE TRAVEL INFORMATION FROM THE FOLLOWING SOURCES? 1996



Overall, New Jersey residents find travel information from all sources relatively accurate.

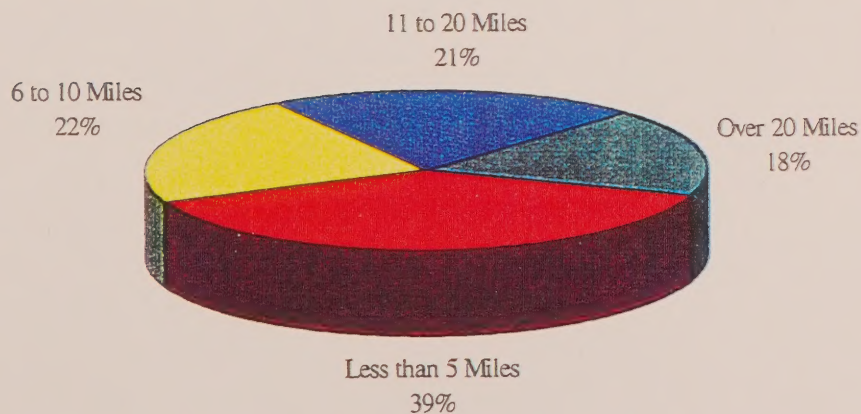
1996 NJDOT REPORT ON CUSTOMER SATISFACTION

HOW OFTEN DO YOU FACE CONGESTION GOING TO WORK? 1996



Over half of New Jersey residents face congestion when they travel to work. This is consistent for residents in the northern, central, and southern parts of the state.

HOW FAR DO YOU LIVE FROM YOUR JOB? 1996



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